

**2020**

**ANNUAL OPERATING PLAN**  
**for**  
**FISH PRODUCTION PROGRAMS**  
**in the**  
**CLEARWATER RIVER BASIN**

by

U.S Fish and Wildlife Service

Idaho Department of Fish and Game

Nez Perce Tribe

January 29, 2020

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## 0. Preamble

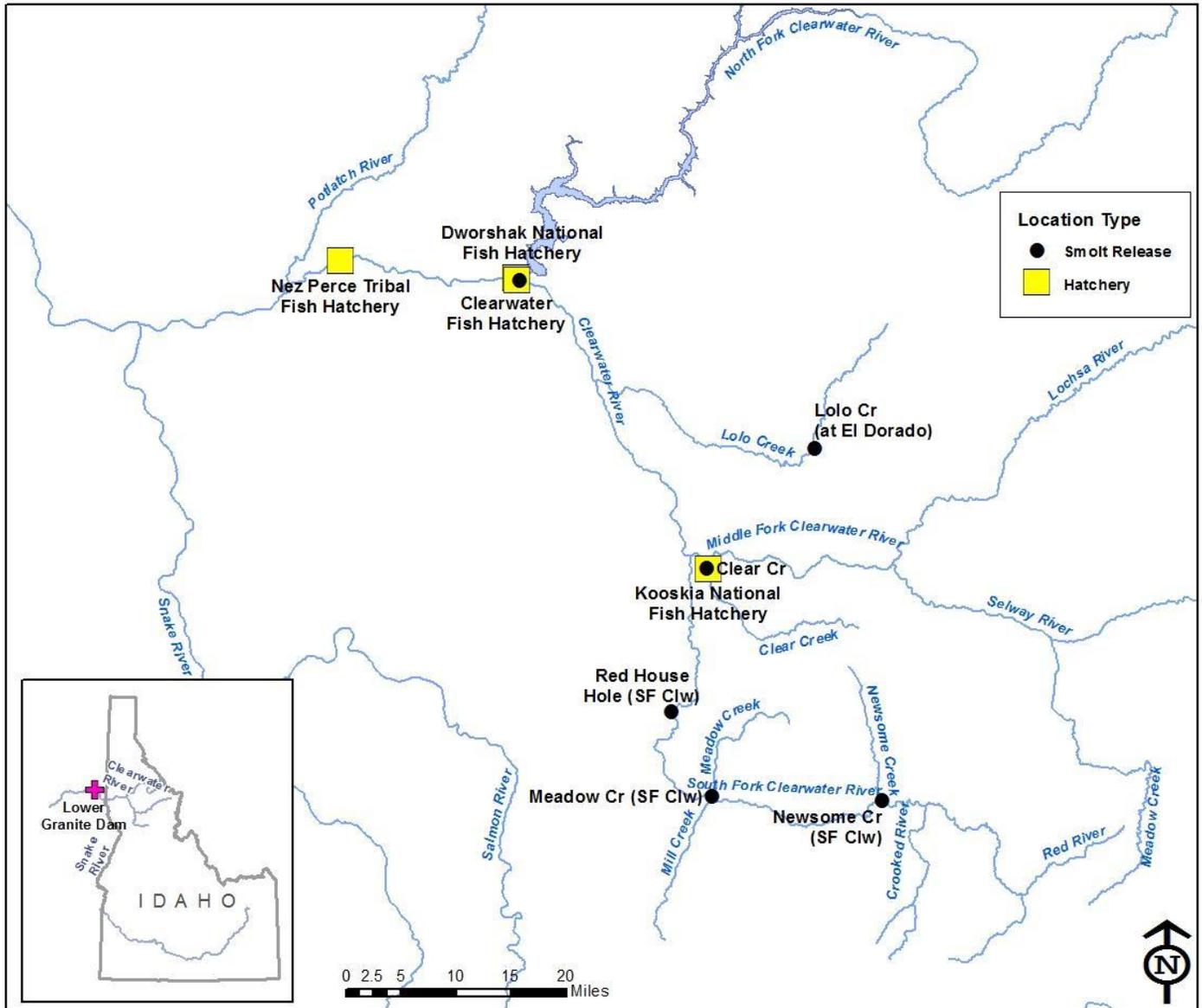
The Annual Operating Plan (AOP) meeting and AOP/SOP documents are planning, coordination and logistics tools that identify the expected implementation of a number of hatchery operation and research/monitoring activities for the coming year in a transparent, open manner.

It is the responsibility of all AOP parties to participate in AOP meetings, provide follow up information and assistance as requested or needed, and work in good faith to complete the AOP document within the timeframe agreed upon at the AOP coordination meeting. A finalized electronic version of the AOP will be available to all cooperating agencies and serve as the working version of the document.

If a disputed or incomplete item is identified at the AOP meeting and persists to the end of the agreed completion timeframe for finalizing the AOP documents, the AOP will be finalized without the disputed or incomplete section. However, parties to the dispute will add a placeholder in the document, so they can work toward resolution.

After the AOP is finalized, and based on unforeseen or unanticipated circumstances (e.g., lower than expected returns, loss of production, infrastructure issues as examples), changes or deviations from the AOP may be warranted. In those cases, there is an expectation that the lead agency that has identified the issue will communicate with the appropriate AOP parties, through the weekly coordination calls or by email, so they can work collaboratively to address it and/or work towards resolution. Implemented changes should be documented in writing by the lead agency and communicated, to ensure transparency and as documentation of the change. These changes should also be captured in various year-end reports.

# 1. Summer Steelhead

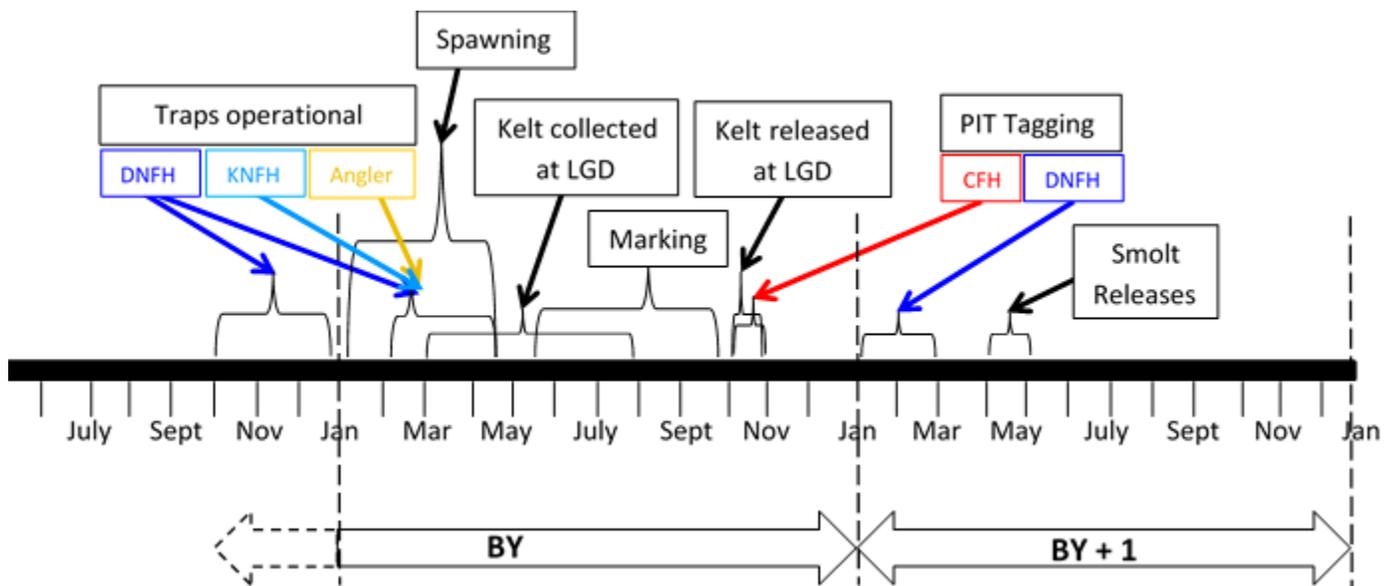


**Figure 1.1.** Steelhead trapping, hatchery facilities and smolt release locations. Table below gives smolt release goals by release site.

**Table 1.1.** BY 2019 Steelhead Release Goals for 2020.

Rearing Facility	Program	Brood Collection Site	Release Site	BY2019 Smolt Release Goals	Size (FPP)
DNFH	NF Clearwater	DNFH (Trad. & Air Spawned)	DNFH	1,200,000	5.8
			Clear Creek	300,000	5.8
			Lolo Creek	200,000	5.8
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole-SF Clw	400,000	5.8
Total				2,100,000	
CFH/DNFH	CFH	SFClwR Angler (DNFH/KNFH)	Meadow Creek-SF Clw	501,000	4.5
			Red House Hole-SF Clw	219,000	4.5
			Newsome Creek-SF Clw	123,000	4.5
Total				843,000	
Grand Total				2,943,000	

**1.1. Timeline and Flowchart for Steelhead Production**



**Figure 1.2.** Timeline for Steelhead Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

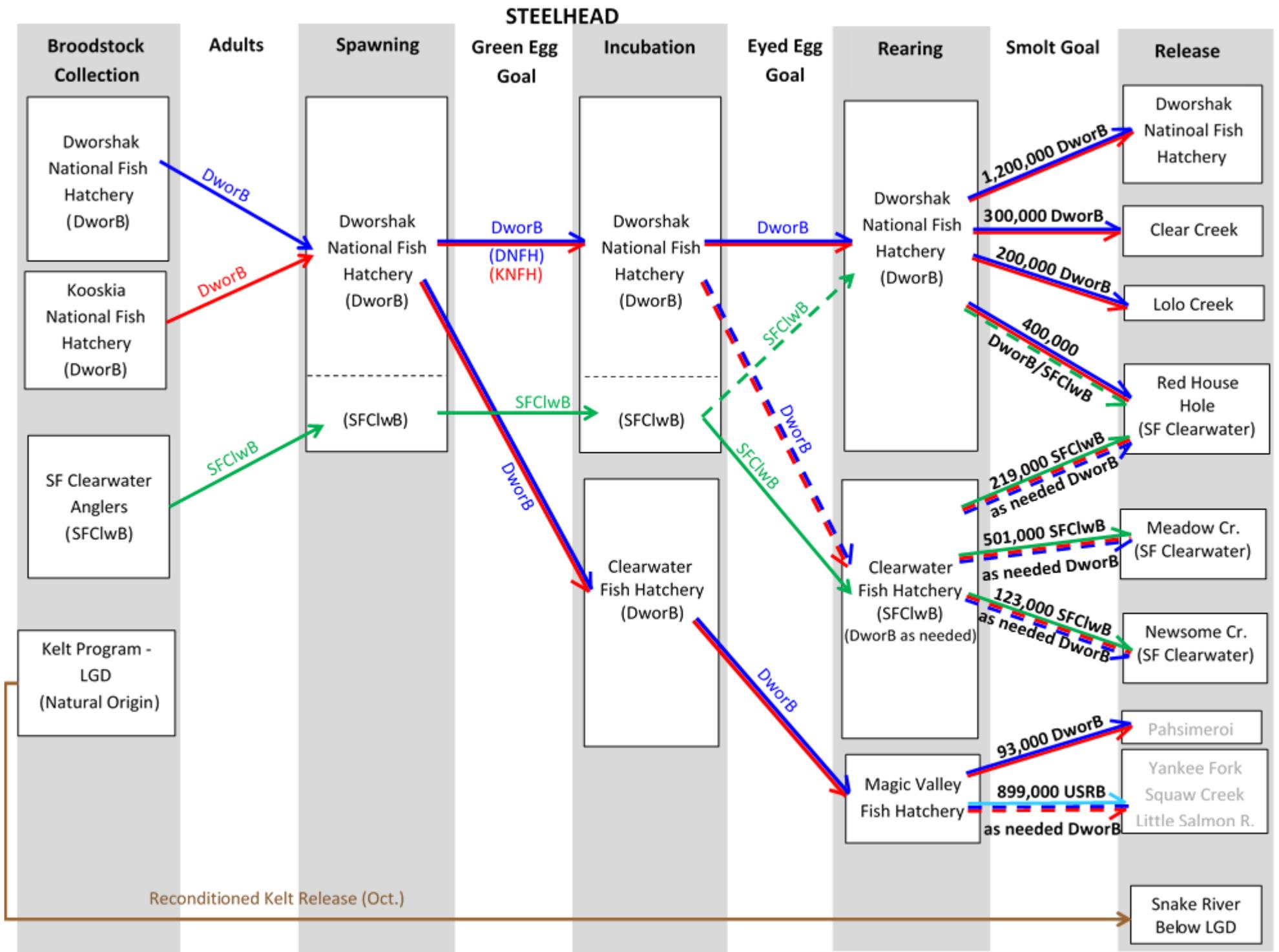


Figure 1.3. Fish and egg movements for Steelhead. Numbers represent 2020 releases.

## 1.2. Releases in 2020 (Smolt BY 2019)

### 1.2.1. Releases in 2020 (Smolt BY 2019) – Totals

**Table 1.2a.** Steelhead Rearing Metrics for BY 2019 fish for release in 2020

Rearing Facility	Program	Brood Collection Site	Release Site	Release Goals		Inventory To Date		Excess Fry/ Fingerlings Released		Projected Smolt Releases		
				Number	Size (FPP)	Date	Number	Number	Release Site	Dates	Number	Size (FPP)
DNFH	NF Clearwater	DNFH (Trad. & Air Spawned)	DNFH	1,200,000	5.8	1/1/2020	1,246,868	0		4/15/2020	1,240,634	5.8
			Clear Creek	300,000	5.8	1/1/2020	343,781	0		4/6-10/2020	342,062	5.8
			Lolo Creek	200,000	5.8	1/1/2020	196,568	0		4/13-14/2020	195,585	5.8
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole-SF Clw	400,000	5.8	1/1/2020	386,590	0		4/6-10/2020	384,657	5.8
Total				2,100,000			2,173,807	0			2,162,938	6
CFH	CFH	SFClwR Angler (DNFH/KNFH)	Meadow Creek-SF Clw	501,000	4.5	12/31/2019	392,365	0		4/3-4/9/2020	390,011	4.5
			Red House Hole-SF Clw	219,000	4.5	12/31/2019	164,808	0		4/3/2020	163,819	4.5
			Newsome Creek-SF Clw	123,000	4.5	12/21/2019	92,751	0		4/10-4/12/2020	92,194	4.5
Totals				843,000			649,924	0			646,024	
Grand Total				2,943,000			2,823,731	0			2,808,962	

**Table 1.2b.** BY 2019 Steelhead Inventory to Date by Mark Type for release in 2020.

Rearing Facility	Program	Brood Collection Site	Release Site	Inventory to Date						PIT Tags				
				Date	Total	Adipose Fin Clip		No Clip		Total # Tags <sup>1</sup>	Funding Source <sup>2</sup>			
						No CWT	CWT	CWT	No CWT		CSS	LSRCP	ACOE	USFWS
DNFH <sup>3,4</sup>	NF Clearwater	DNFH (Trad. & Air Spawned)	DNFH	1/1/2020	1,246,868	1,133,184	113,684	-	-	15,500	8,300	-	7,200	-
			Clear Creek	1/1/2020	343,781	315,360	28,421	-	-	4,200	2,000	-	2,200	-
			Lolo Creek	1/1/2020	196,568	-	-	-	196,568	1,000	500	-	500	-
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole-SF Clw	1/1/2020	386,590	348,695	37,895			4,700	2,100		2,600	-
Total					2,173,807	1,797,239	180,000	0	196,568	25,400	12,900	-	12,500	-
CFH	CFH	SFClwR Angler (DNFH/KNFH)	Meadow Creek-SF Clw	12/31/2019	392,365	264,171	0	128,194	0	10,803	3,200	7,600		
			Red House Hole-SF Clw	12/31/2019	164,808	164,808	0	0	0	4,699	1,400	3,300		
			Newsome Creek-SF Clw	12/31/2019	92,751	0	0	92,751	0	2,598	800	1,800		
Totals					649,924	428,979	0	220,945	0	18,100	5,400	12,700	-	-
Grand Total					2,823,731	2,226,218	180,000	220,945	196,568	43,500	18,300	12,700	12,500	-

<sup>1</sup> Represents actual number tagged if tags have already been applied at the time of this report

<sup>2</sup> Represents number of tags paid for by each agency. Sum total may not equal "Total # Tags" for locations where tagging has already occurred

<sup>3</sup> Received \$20k worth of PIT tags from ACOE instead of 20k PIT tags that DNFH normally receives. Budget should be adjusted for BY2020 SST to include funding for additional 7500 PIT tags.

<sup>4</sup> PIT tagging of DNFH Steelhead begins 7 January 2020

**1.2.2. Releases in 2020 (Smolt BY 2019) - Narrative**

Here are examples of things managers talk about for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt/Egg Release Targets-** e.g. Were you below goal? Was you size at release different than SOP target? Did you depart from the mark plan?
- **Fish/Egg Health-** any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

	Plan for 2020		Changes/Conditions that Occurred 2019-Early 2020		
Release Location	Release Target Smolt BY19	Transport/Release Smolt BY19	Fish Feeding BY19	Fish/Egg Health BY19	Marking BY19
<i>Dworshak National Fish Hatchery (SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (DworB)	NC	NC	NC	Florfenicol treatment for BCWD in Nursery and System I	Takes 1 and 2 were moved outside prior to marking and marked from that location
Clear Creek (DworB)	NC	NC	NC	NC	NC
Red House, SF Clearwater (SFClw/DworB)	NC	NC	NC	NC	NC
Lolo Creek (DworB)	NC	NC	Fish will be hand fed with Bio Oregon throughout entire rearing cycle	NC	NC
<i>Clearwater Fish Hatchery (SOP Section 1.3)</i>					
Meadow Creek SF Clearwater (SFClwB/DworB)	Projected to be 22% short of target due to early/final rearing mortality.	NC	A feed trial was conducted with BY19 steelhead.	Higher than average loss in early rearing and sporadic outbreaks of BCWD in final rearing	
Red House Hole SF Clearwater (SFClwB/DworB)	Projected to be 25% short of target due to early/final rearing mortality.	NC	A feed trial was conducted with BY19 steelhead.	Higher than average loss in early rearing and sporadic outbreaks of BCWD in final rearing	

	Plan for 2020		Changes/Conditions that Occurred 2019-Early 2020		
Release Location	Release Target Smolt BY19	Transport/Release Smolt BY19	Fish Feeding BY19	Fish/Egg Health BY19	Marking BY19
Newsome Creek SF Clearwater (SFClwB/DworB)	Projected to be 26% short of target due to early/final rearing mortality.	NC	A feed trial was conducted with BY19 steelhead.	Higher than average loss in early rearing and sporadic outbreaks of BCWD in final rearing	

**1.3. Trap Operations and Production Planning for 2020 (Smolt BY 2020)**

**BY 2020 Steelhead smolt production goals for release in 2021.**

Rearing Facility	Program	Brood Collection Site	Release Site	Smolt Release Goals
DNFH	NF Clearwater	DNFH (Trad. Spawned) <sup>1</sup>	MS Clearwater at DNFH	1,200,000
			Clear Creek	300,000
			Lolo Creek	200,000
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole - SF Clw	400,000
Total				2,100,000
CFH/DNFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	501,000
			Red House Hole-SF Clw	219,000
			Newsome Creek-SF Clw	123,000
Total				843,000
Grand Total				2,943,000

<sup>1</sup> Additional brood are collected for the Upper Salmon River program (to be incubated at CFH, reared at MVFH, and released at Pahsimeroi). Table 1.3a shows details of brood acquisition, which include fish to be spawned for this program. See the Salmon and Snake River AOP for details on rearing of these progeny.

**1.3.1. Trap Operations and Production Planning for 2020 (Smolt BY 2020) – TOTALS**

**Table 1.3a.** BY 2020 - Steelhead Spawning/Egg Take Plan.

Take		Eggs / Female by Spawn Type	Hatchery Program / Brood Source / Females Spawmed By Method / Green Eggs Taken											Comments
			DNFH - All Releases					CFH - South Fork Clearwater		MVH- Upper Salmon River <sup>1</sup>		Grand Totals		
DWORK			SFCWR		DNFH Green Eggs Projections Combined	SFCWR		DWORK		Females Kill Sp	Green Eggs Projections			
Females Kill Sp	Green Eggs Projections		Females Kill Sp	Green Eggs Projections		Females Kill Sp	Green Eggs Projections	Females Kill Sp	Green Eggs Projections					
No.	Dates	Kill Sp	Kill Sp	Green Eggs Projections	Kill Sp	Green Eggs Projections	Green Eggs Projections Combined	Females Kill Sp	Green Eggs Projections	Females Kill Sp	Green Eggs Projections	Females Kill Sp	Green Eggs Projections	
1 E	13-Jan	6,882	52	357,864	0	0	357,864		0		0	52	357,864	
2 E	21-Jan	6,882	52	357,864	0	0	357,864		0		0	52	357,864	
3	4-Feb	6,882	26	178,932	0	0	178,932		0		0	26	178,932	
4	18-Feb	6,882	51	350,982	0	0	350,982		0		0	51	350,982	
5	25-Feb	6,882	51	350,982	0	0	350,982		0		0	51	350,982	
6	4-Mar	6,882	0	0	0	0	0		0		0	0	0	CFH Take - No DNFH spawn this week
7	10-Mar	6,882	51	350,982	0	0	350,982		0		0	51	350,982	CFH Spawn Wed 3/11
8	17-Mar	6,882	0	0	45	309,690	309,690		0		0	45	309,690	CFH Spawn Wed 3/18
9	24-Mar	6,882	44	302,808	44	302,808	605,616		0		0	88	605,616	
10	31-Mar	6,882	0	0	0	0	0		0	21	144,522	21	144,522	
11	7-Apr	6,882	52	357,864	0	0	357,864		0		0	52	357,864	
<b>Cumulative</b>			379	2,608,278	89	612,498	3,220,776	0	0	21	0	468	3,220,776	

<sup>1</sup> Number of females spawned will be dependent on the number of fish needed to backfill the Upper Salmon B programs

**1.3.2. Trap Operations and Production Planning for 2020 (Smolt BY 2020) – NARRATIVE**

Discuss if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Rearing Location	Plan for 2020 (BY 2020)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Dworshak/Kooskia National Fish Hatchery Ladder/Trap (Fall 2019-Spring 2020)(SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (DworB)	<ul style="list-style-type: none"> <li>- Ovaplant-L (sGnRHa) was used on males as a liquid alternative to Ovaplant (cholesterol pellet) to speed maturation of early males and increase milt volume.</li> <li>- As of BY2019 Fish Health no longer samples 30% from each take for IHN. A minimum of 150 OF's are taken over the entire spawn. Also, as of BY2019 no testing for WD is conducted on the adults.</li> </ul>	<ul style="list-style-type: none"> <li>- Trap was opened earlier than normal (09/24/19) and ran non-stop until 10/31/19.</li> <li>- Trap re-opened 11/18/19 and ran non-stop until 12/13/19.</li> <li>- Early season collection goals were not followed this season. The new goal was to have broodstock in hand before the end of 2019 and the trap operated to achieve that.</li> <li>- This year adults were hauled to DNFH by NPTH and kelt staff from Lower Granite Dam. The Dam collected adults and trucking ran from October 4 to November 13, 2019. Trucking occurred every M/W/F through Oct/Nov.</li> </ul>	<ul style="list-style-type: none"> <li>- Incorporate brood for DNFH onsite release group into later spawning takes.</li> <li>- Lolo release group will be spawned over two takes (8, 9) instead of one spawn take.</li> </ul>	<ul style="list-style-type: none"> <li>- Check motility on all milt prior to use of male at activation table.</li> <li>- Use GEN ID numbers as fish ID numbers throughout spawning season (i.e., 001, 002, etc.) instead of each take starting back at 1001 (Take 1), 2001 (Take 2).</li> <li>- May trial the use of Whirlpaks with O2 for milt storage.</li> </ul>	<ul style="list-style-type: none"> <li>- All steelhead (less mini jacks) were ponded and kept for broodstock due to a low return year and uncertainty of making brood collection goals.</li> <li>- As collection goal is met, steelhead will be high-graded and preferred sizes will be used (M greater than 72cm, F greater than 75cm).</li> </ul>
Kooskia National Fish Hatchery (DworB)	As of BY2019 no testing for WD is conducted on the adults.	KNFH adult trap will be opened February 14 for collection.			

Rearing Location	Plan for 2020 (BY 2020)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
Clearwater Fish Hatchery (DworB)	NC	NC	NC	- Check motility on all milt prior to use of male at activation table. -Use of Whirl Pak with O2 for storage. -Delay temperature shift	NC
Magic Valley Fish Hatchery (DworB)			Providing eggs for this production a topic of discussion between NPT and IDFG pending brood collection and harvest shares		
<i>Reconditioned Kelts (SOP Section 1.2)</i>					
Dworshak National Fish Hatchery (Natural/Ad intact B)		Continue Lower Granite collections but may add Little Goose Dam			
Nez Perce Tribal Hatchery (Natural/Ad intact B)		Continue Lower Granite collections but may add Little Goose Dam			
<i>SF Clearwater Anglers (SOP Section 1.3)</i>					
Dworshak National Fish Hatchery (SFClWB)	NC	- DNFH staff will no longer participate in the collection of SFLB. CFH staff and IDFG creel staff will process brood and bring them to DNFH.	NC	- Same as above for DNFH (checking motility on all males, new fish ID numbering to match GEN ID, Whirlpaks).	NC

Rearing Location	Plan for 2020 (BY 2020)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
Clearwater Fish Hatchery (SFCIWB)	NC	IDFG Creel Crew will handle hauling after 3/11	NC	<ul style="list-style-type: none"> <li>- Check motility on all milt prior to use of male at activation table.</li> <li>-Use of Whirl Pak with O2 for storage.</li> <li>-Delay temperature shift until day after spawning</li> </ul>	KNFH if adults are needed for they will be sorted and transported to DNFH, adults not needed will be evaluated and released

#### 1.4. Marking and Rearing Plan for 2020 (Smolt BY 2020)

##### BY 2020 Steelhead smolt production goals for release in 2021.

Rearing Facility	Program	Brood Collection Site	Release Site	Smolt Release Goals
DNFH	NF Clearwater	DNFH	MS Clearwater at DNFH	1,200,000
			Clear Creek	300,000
			Lolo Creek	200,000
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole - SF Clw	400,000
Total				2,100,000
CFH/DNFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	501,000
			Red House Hole-SF Clw	219,000
			Newsome Creek-SF Clw	123,000
Total				843,000
Grand Total				2,943,000

#### 1.4.1. Marking and Rearing Plan for 2020 (Smolt BY 2020) – TOTALS

Table 1.4a. Steelhead Projected marking for BY 2020 Production for release in 2021.

Rearing Facility	Program	Brood Collection Site	Release Site	Smolt Release Goals	Projected Marking				PIT Tags						
					Adipose Fin Clip		No Clip		Total # Tags	Funding Source					
					No CWT	CWT	CWT	No CWT		CSS	LSRCP	NPT	IPC	ACOE	USFWS
DNFH	NF Clearwater	DNFH	MS Clearwater at DNFH <sup>1</sup>	1,200,000	1,086,000	114,000	-	-	20,000	8,300	-	-	-	11,700	-
			Clear Creek	300,000	272,000	28,000	-	-	5,400	2,000	-	-	-	3,400	-
			Lolo Creek	200,000	-	-	-	200,000	2,500	500	-	-	-	2,000	-
	SF Clearwater	SFClwR Angler (DNFH)	Red House Hole - SF Clw	400,000	362,000	38,000			5,000	2,100				2,900	
Total				2,100,000	1,720,000	180,000	0	200,000	32,900	12,900	0	0	0	20,000	0
CFH/DNFH	CFH	SFClwR Angler (DNFH)	Meadow Creek-SF Clw	501,000	291,000		210,000		10,800	3,200	7,600				
			Red House Hole-SF Clw	219,000	219,000			4,700	1,400	3,300					
			Newsome Creek-SF Clw	123,000			123,000	6,000	800	1,800	3,400				
Totals				843,000	510,000	0	333,000	0	21,500	5,400	12,700	3,400	0	0	0
Grand Totals				2,943,000	2,230,000	180,000	333,000	200,000	54,400	18,300	12,700	3,400	0	20,000	0

<sup>1</sup> 1500 PIT tags are SMP funding

**1.4.2. Marking and Rearing Plan for 2020 (Smolt BY 2020) – NARRATIVE**

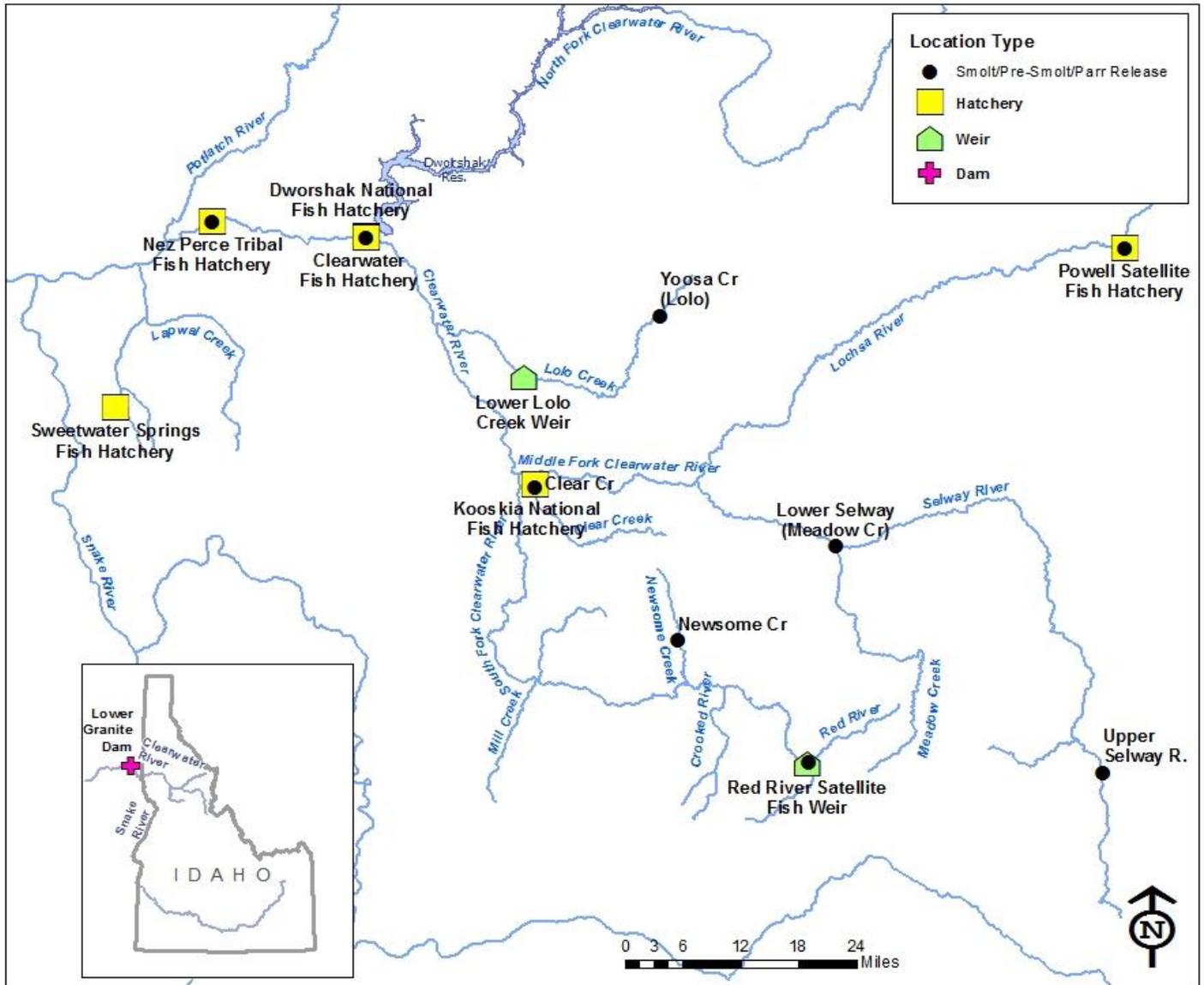
Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - anticipated changes to normal fish health sampling or treatments to start for BY2020
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. changes to schedules, fish handling or movement, raceway loading for PBT, %PBT etc.

Release Location	Plan for 2020 (BY 2020)			
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
<i>Dworshak National Fish Hatchery (SOP Section 1.2)</i>				
Dworshak NFH (DworB)	- Six month fish health assessment to replace a single 60 fish prerelease sampling	NC	- T/R Iodine treatment on eggs in incubation, in addition to M/W/F Formalin egg treatments.	- Some marking will occur in outside rearing (BPs) instead of fish being marked from nursery to BPs. DNFH staff will pump fish from the nursery to System I BPs one-week prior to marking.
Clear Creek (DworB)	- Six month fish health assessment to replace a single 60 fish prerelease sampling	NC	- T/R Iodine treatment on eggs in incubation, in addition to M/W/F Formalin egg treatments.	- Some marking will occur in outside rearing (BPs) instead of fish being marked from nursery to BPs. DNFH staff will pump fish from the nursery to System I BPs one-week prior to marking.
Red House, SF Clearwater (SFClw/DworB)	- Six month fish health assessment to replace a single 60 fish prerelease sampling	NC	- T/R Iodine treatment on eggs in incubation, in addition to M/W/F Formalin egg treatments.	- Some marking will occur in outside rearing (BPs) instead of fish being marked from nursery to BPs. DNFH staff will pump fish from the nursery to System I BPs one-week prior to marking.

Release Location	Plan for 2020 (BY 2020)			
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking
Lolo Creek (DworB)	- Six month fish health assessment to replace a single 60 fish prerelease sampling	- Fish will be hand fed throughout the entire rearing cycle (instead of demand feeders). - Bio-Oregon feed will be fed throughout entire rearing process (usually switch to Skretting once on demand feeders).	- T/R Iodine treatment on eggs in incubation, in addition to M/W/F Formalin egg treatments. - Fish will be pumped into the nursery approximately two weeks earlier than normal to allow for more indoor rearing growth. - Rearing in two mixed cells will be used (in addition to two standard BPs) for Lolo release group.	NC
<i>Clearwater Fish Hatchery (SOP Section 1.3)</i>				
Meadow Creek SF Clearwater (SFClwB/DworB)	NC	NC	Efforts will be made to reduce mixing lots in early rearing.	NC
Red House Hole SF Clearwater (SFClwB/DworB)	NC	NC	Efforts will be made to reduce mixing lots in early rearing.	NC
Newsome Creek SF Clearwater (SFClwB/DworB)	NC	NC	Efforts will be made to reduce mixing lots in early rearing.	NC

## 2. Spring/Summer Chinook



**Figure 2.1.** Locations of Spring/Summer Chinook Salmon hatchery facilities and smolt/parr/pre-smolt releases. Table below gives smolt and parr/pre-smolt release goals by release site.

**Table 2.1. Spring/Summer Chinook Goals for Release in 2020**

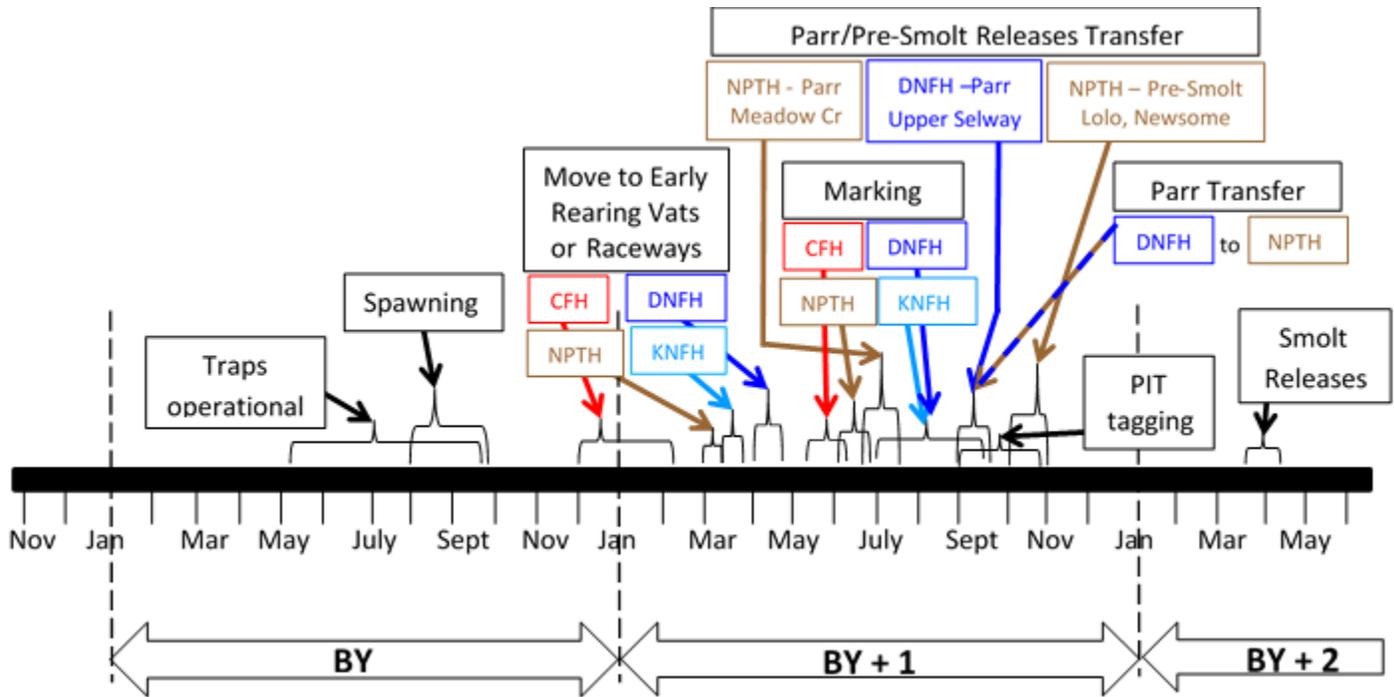
**BY2018 SMOLTS**

Action in 2020	Brood/Release Year	Hatchery Program	Rearing Facility	Brood Collection Site	Release Site	Smolt Release Goal	
Release	BY2018 RY2020	<b>Spring</b>					
		DNFH - LSRCP	DNFH	DNFH		NF Clearwater (DNFH)	1,650,000
		Total					1,650,000
		KNFH-NPT	KNFH	KNFH		Kooskia NFH	650,000
		Total					650,000
		NPTH	NPTH	DNFH		NPTH	200,000
						Lolo Creek	180,000
		Total					380,000
					SFCIw	Red River	1,280,000
		CFH-LSRCP	CFH		KNFH/DNFH	NF Clearwater-CFH (Baffle)	389,000
						NF Clearwater-CFH (Regular)	320,000
						Selway River-Lower	400,000
						Clear Creek	720,000
		Total					3,109,000
		Spring Grand Total					5,789,000
<b>Summer</b>							
CFH-LSRCP	CFH		Pow/SFSR	Powell Pond	640,000		
Summer Grand Total					640,000		

**BY2019 PARR and PRE-SMOLTS SMOLTS**

Action in 2020	Brood/Release Year	Hatchery Program	Rearing Facility	Brood Collection Site	Life Stage	Release Site	Smolt Release Goal	
Marking and Release	BY2019 RY2020	<b>Spring</b>						
		DNFH	DNFH	DNFH		Parr	Selway River-Upper	300,000
		Total					300,000	
		NPTH	NPTH	NPTH		Pre-Smolt	Newsome Cr (SF Clw)	75,000
						Pre-Smolt	Lolo Cr (SF Clw)	150,000
						Parr	Meadow Cr (Selway)	400,000
		Total					625,000	
		Spring Grand Total					925,000	

2.1. Timeline and Flowchart for Spring/Summer Chinook Production



**Figure 2.2.** Timeline for Spring/Summer Chinook Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

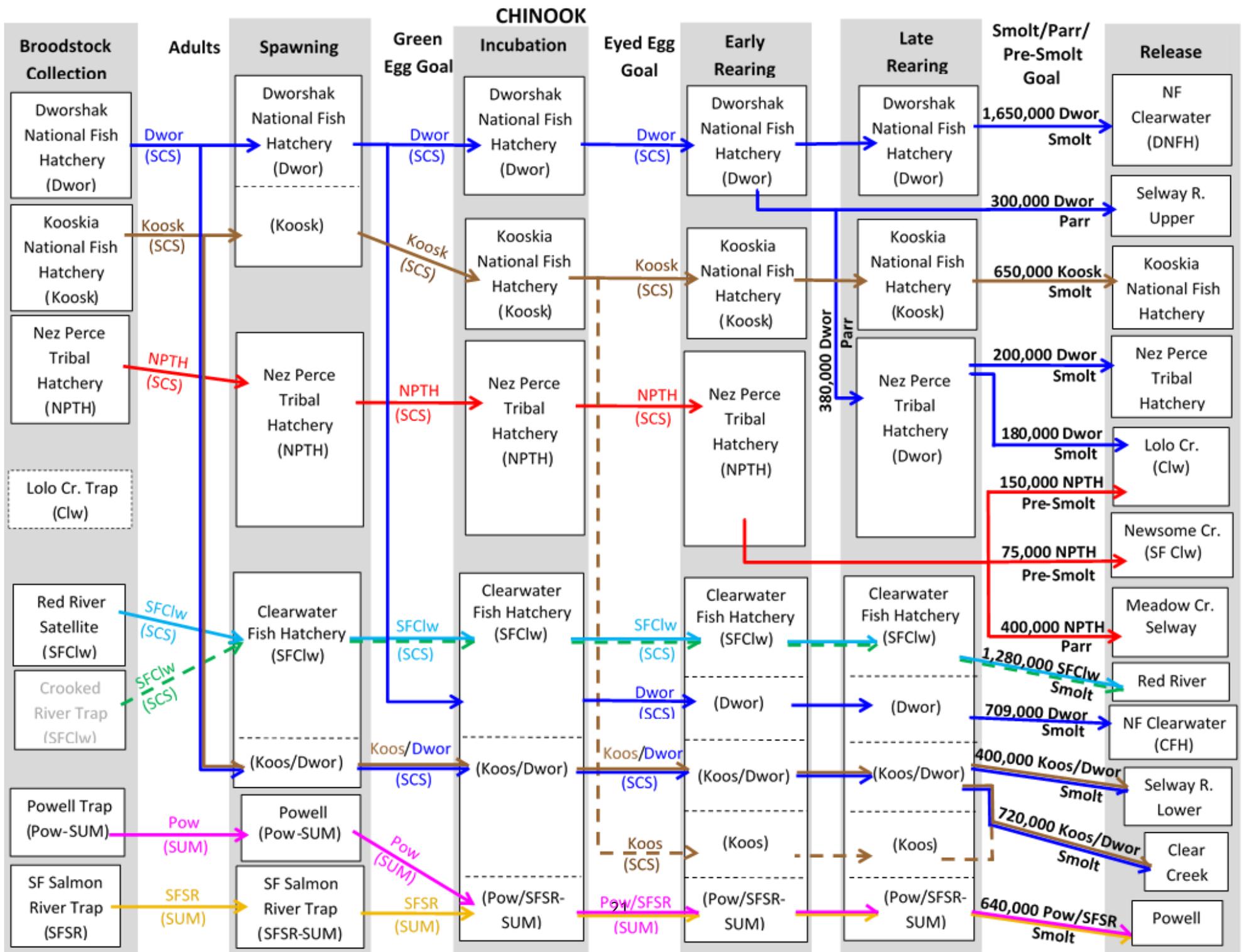


Figure 2.3. Chinook movements for Clearwater. Numbers represent 2020 releases.

**2.2. Releases in 2020 (Smolt BY 2018, Parr/Pre-Smolt BY 2019)**

**2.2.1. Releases in 2020 (Smolt BY 2018, Parr/Pre-Smolt BY 2019) – Totals**

**Table 2.2a. BY2018 SMOLTS - Sp/Su Chinook Salmon inventories by life stage, smolt release goals and projected releases in 2020.**

Hatchery Program	Run	Rearing Facility	Brood Collection Site	Release Site	Release Goals		Inventory To Date		Projected Smolt Release		
					Number	Size (FPP)	Date	Number	Dates	Number	Size (FPP)
<b>Spring</b>											
DNFH - LSRCP	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	1,650,000	20.0	1/1/2020	1,639,276	3/25-3/26/2020	1,631,080	20.0
Total					1,650,000			1,639,276		1,631,080	
KNFH-NPT	SpCS	KNFH	KNFH	Kooskia NFH	650,000	20.0	1/2/2020	687,052	3/26/2020	686,752	20.0
Total					650,000			687,052		686,752	
NPTH	SpCS	NPTH	DNFH	NPTH	200,000	20.0	12/31/2019	203,464	3/25-3/26/2020	202,464	20.0
				Lolo Creek	180,000	20.0	12/31/2019	190,003	3/25-3/26/2020	189,053	20.0
Total					380,000			393,467		391,517	
CFH-LSRCP	SpCS	CFH	SFClwr/LWS	Red River	1,280,000	16.0	12/31/2019	1,105,244	3/25-3/29	1,105,189	16.0
			DNFH	NF Clearwater-CFH (Baffle)	389,000	16.0	12/31/2019	389,678	3/28/2020	389,659	16.0
			DNFH/SFClwr	NF Clearwater-CFH (Regular)	320,000	16.0	12/31/2019	202,961	3/27/2020	202,951	16.0
			LWS	Selway River-Lower	400,000	16.0	12/31/2019	398,826	3/21-3/22	398,806	16.0
			KNFH/LWS	Clear Creek	720,000	16.0	12/31/2019	640,935	3/30	640,903	16.0
Total					3,109,000			2,737,644		2,737,507	
Spring Grand Total					5,789,000			5,457,439		5,446,856	
<b>Summer</b>											
CFH-LSRCP	SuCS	CFH	Pow/SFSR	Powell Pond	640,000		12/31/2019	791,389	3/11-3/14	791,350	16.0
Summer Grand Total					640,000			791,389		791,350	
Spring/Summer Grand Total					6,429,000			6,248,828		6,238,206	

**Table 2.2b.** BY2018 SMOLTS - Sp/Su Chinook Salmon Inventory to Date by Mark Type for release in 2020.

Hatchery Program	Run	Rearing Facility	Brood Collection Site	Release Site	Inventory to Date						PIT Tags				
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
							CWT	No CWT	CWT	No CWT		CSS	LSRCP	USFWS	BPA
<b>Spring</b>															
DNFH - LSRCP	SpCS	DNFH	DNFH	NF Clearwater (DNFH)	1/1/2020	1,639,276	134,290	1,504,986	-	-	42,000	42,000	-	-	-
Total						1,639,276	134,290	1,504,986	0	0	42,000	42,000	0	0	0
KNFH-NPT	SpCS	KNFH	KNFH	Kooskia NFH	12/31/2019	687,052	107,604	519,969	0	59,479	8,000			7,970	
Total						687,052	107,604	519,969	0	59,479	8,000	0	0	7,970	0
NPTH	SpCS	NPTH	DNFH	NPTH	12/31/2019	203,464	66,478	664	126,702	9,620	600				600
				Lolo Creek	12/31/2019	190,003	0	190,003	0	0	1,000				1,000
Total						393,467	66,478	190,667	126,702	9,620	1,600	0	0	0	1,600
CFH-LSRCP	SpCS	CFH	SFClw	Red River	12/31/2019	1,105,244	119,928	985,316	0	0	17,062	5,062	12,000	0	0
			KNFH/DNFH	NF Clearwater-CFH (Baffle)	12/31/2019	389,678	389,678	0	0	0	17,080	2,480	14,600	0	0
				NF Clearwater-CFH (Regular)	12/31/2019	202,691	0	202,691	0	0	0	0	0	0	0
				Selway River-Lower	12/31/2019	398,826	119,934	146,106	132,786	0	17,066	5,066	12,000	0	0
				Clear Creek	12/31/2019	640,935	120,558	520,377	0	0	9,776	3,476	6,300	0	0
Total						2,737,374	750,098	1,854,490	132,786	0	60,984	16,084	44,900	0	0
Spring Grand Total						5,457,169	1,058,470	4,070,112	259,488	69,099	112,584	58,084	44,900	7,970	1,600
<b>Summer</b>															
CFH-LSRCP	SuCS	CFH	Pow/SFSR	Powell Pond	12/31/2019	791,389	143,434	280,466	119,956	247,533	25,446	13,446	12,000	0	0
Summer Grand Total						791,389	143,434	280,466	119,956	247,533	25,446	13,446	12,000	0	0
Spring and Summer Grand Total						6,248,558	1,201,904	4,350,578	379,444	316,632	138,030	71,530	56,900	7,970	1,600

**Table 2.2c.** BY2019 PARR and PRE-SMOLT - Sp/Su Chinook Salmon inventories by life stage, release goals and projected releases in 2020.

Hatchery Program	Rearing Facility	Brood Collection Site	Life Stage	Release Site	Inventory To Date		Release Goals		Projected Releases		
					Date	Number	Number	Size (FPP)	Dates	Number	Size (FPP)
<b>Spring</b>											
DNFH	DNFH	DNFH	Parr	Selway River-Upper	12/31/19	322,007	300,000	100.0	9/9/2020	294,636	100.0
Total						322,007	300,000			294,636	
NPTH	NPTH	NPTH	Pre-Smolt	Newsome Cr (SF Clw)	12/31/19	736,415	75,000	30.0	10/14/2020	729,015	30.0
			Pre-Smolt	Lolo Cr (SF Clw)			150,000	30.0	10/14/2020		30.0
			Parr	Meadow Cr (Selway)			400,000	117.0	6/29/2020		117.0
Total						736,415	625,000			729,015	
Grand Total						1,058,422	925,000			1,023,651	

**2.2.2. Releases in 2020 (Smolt BY 2018, Parr/Pre-Smolt BY 2019) – Total**

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt/Egg Release Targets-** e.g. were you below goal, was your size at release different than SOP target etc.
- **Fish/Egg Health-** any epizootic history, antibiotic treatments, was production culled at any point
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

Release Location	Plan for 2020		Changes/Conditions that Occurred 2019-Early 2020		
	Release Target Smolt BY18 Parr/Pre-Smolt BY19	Transport/Release Smolt BY18 Parr/Pre-Smolt BY19	Fish Feeding Smolt BY18 Parr/Pre-Smolt BY19	Fish/Egg Health Smolt BY18 Parr/Pre-Smolt BY19	Marking Smolt BY18 Parr/Pre-Smolt BY19
<i>Dworshak National Fish Hatchery (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	NC	NC	NC	Elevated mortality early in the rearing cycle due to Phoma	NC
Selway River Upper (Dwor-Parr)	NC	NC	NC	NC	NC
<i>Kooskia National Fish Hatchery (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koosk)				Low female fecundity and low eye up in take 4 BY19 will be under 650k	
<i>Nez Perce Tribal Hatchery (SOP Section 2.4)</i>					
Nez Perce Tribal Hatchery (Dwor Smolt transferred to NPTH from DNFH)	NC	NC	NC	NC	N/C

Release Location	Plan for 2020		Changes/Conditions that Occurred 2019-Early 2020		
	Release Target Smolt BY18 Parr/Pre-Smolt BY19	Transport/Release Smolt BY18 Parr/Pre-Smolt BY19	Fish Feeding Smolt BY18 Parr/Pre-Smolt BY19	Fish/Egg Health Smolt BY18 Parr/Pre-Smolt BY19	Marking Smolt BY18 Parr/Pre-Smolt BY19
Lolo Creek (Dwor-Smolt transferred to NPTH from DNFH)	NC	Release with On Station program due to lack of CWT (associate with NPTH OS release) and also increased Juvenile survival data for 2019 Smolt NPTH releases.	NC	NC	These fish did not receive CWT's, only AD Clips. CWT was budgeted but not ordered.
Lolo Creek (NPTH-Pre-Smolt)	Due to BY19 broodstock shortages this release is Little White Salmon stock eggs - full release target	NC	NC	NC	NC
Newsome Creek (NPTH-Pre-Smolt)	Due to BY19 broodstock shortages this release is Little White Salmon stock eggs - full release target	NC	NC	NC	NC
Meadow Creek Selway (NPTH-Parr)	Due to BY19 broodstock shortages this release is Little White Salmon stock eggs - full release target	NC	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Sections 2.5)</i>					
Red River (SFClw)	Projected to be 14% short of target due to brood shortfall in 2018. 1.4% LWS stock filled this release.	Release may be delayed a week due to treatment withdrawal period.		Slightly elevated mortality in one raceway due to BKD. Treating with erythromycin.	NC
NF Clearwater-CFH (Baffle) (Dwor/Koos)	NC	NC	NC	NC	NC
NF Clearwater-CFH (Regular) (Dwor/Koos)	Projected to be 37% short of target due to brood shortfall in 2018.	NC	NC	NC	NC

Release Location	Plan for 2020		Changes/Conditions that Occurred 2019-Early 2020		
	Release Target Smolt BY18 Parr/Pre-Smolt BY19	Transport/Release Smolt BY18 Parr/Pre-Smolt BY19	Fish Feeding Smolt BY18 Parr/Pre-Smolt BY19	Fish/Egg Health Smolt BY18 Parr/Pre-Smolt BY19	Marking Smolt BY18 Parr/Pre-Smolt BY19
Selway River-Lower (Dwor/Koos)	LWS stock filled 100% of this release.	NC	NC	NC	NC
Clear Creek (Dwor/Koos)	Projected to be 11% short of target due to brood shortfall in 2018. LWS stock filled 10.7% of this stock.	NC	NC	NC	NC
Powell (Pow/SFSR-Summer)	Projected to be 24% above target. Surplus summer Chinook were spawned in 2018 to offset shortage of spring Chinook.	NC		NC	NC

2.3. Trap Operations and Production Planning for 2020 (Smolt and Parr/Pre-Smolt BY 2020)

**BY2020 SMOLTS - Spring/Summer Chinook Goals for Release in 2022**

Action in 2020	Brood/Release Year	Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal (US v OR)	Smolt Release Goal (Including Additional Production)		
Trapping	BY2020 RY2022	<b>Spring</b>							
		DNFH - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)		1,050,000	1,650,000	
		Total						1,050,000	1,650,000
		KNFH-NPT	KNFH	KNFH	Kooskia NFH		650,000	650,000	
		Total						650,000	650,000
		NPTHC	DNFH	DNFH	Trans. to NPTH-NPTH		200,000	200,000	
					Trans. to NPTH-Lolo Creek		0	180,000	
		Total						200,000	380,000
		CFH-LSRCP	SFCIw	DNFH	CFH	Red River		1,100,000	1,280,000
						NF Clearwater-CFH (Baffle)		0	389,000
						NF Clearwater-CFH (Regular)		0	320,000
						Selway River-Lower		400,000	400,000
						Clear Creek		635,000	720,000
		Total						2,135,000	3,109,000
		Spring Grand Total						4,035,000	5,789,000
<b>Summer</b>									
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond (SUM)		640,000	640,000			
Summer Grand Total <sup>1</sup>						640,000	640,000		

<sup>1</sup> Powell is not a US v OR program; however we will target 640,000 summer Chinook smolts even if the spring Chinook production target is set at the base US v OR level.

**BY2020 PARR and PRE-SMOLT - Spring/Summer Chinook Goals for Release in 2022**

Action in 2020	Brood/Release Year	Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal	
Trapping	BY2020 RY2021	<b>Spring</b>						
		DNFH	Parr	DNFH	DNFH	Selway River-Upper		300,000
		Total						300,000
		NPTHC	Pre-Smolt	NPTHC	NPTHC	Newsome Cr (SF Clw)		75,000
			Pre-Smolt	NPTHC		Lolo Cr (Clw)		150,000
			Parr	NPTHC		Meadow Cr (Selway)		400,000
		Total						625,000
Spring Grand Total						925,000		

**2.3.1. Trap Operations and Production Planning for 2020 (Smolt and Parr/Pre-Smolt BY 2020) – TOTALS**

**FULL PRODUCTION**

**Table 2.3a.** 2020 Adult brood stock acquisition schedules for hatchery Sp/Su Chinook Salmon in Clearwater River drainage for FULL PRODUCTION.

Date	Spring				Summer
	Dworshak Trap	Kooskia Trap	NPTH Trap	Red River Trap	Powell
3-May					
10-May					
17-May			5		
24-May		14	10		
31-May		40	14		
7-Jun		449	68	9	
14-Jun		664	106	68	
21-Jun		746	179	145	22
28-Jun		774	232	290	57
5-Jul	196	940	280	469	145
12-Jul	563	1,021	353	580	185
19-Jul	1,053	1,064	386	623	202
26-Jul	1,543	1,099	430	631	207
2-Aug	2,008		454	648	207
9-Aug	2,449		454	657	211
16-Aug			483	682	220
23-Aug			483	768	224
30-Aug			483	853	277
6-Sep				853	387
13-Sep					440
20-Sep					
27-Sep					
<b>Total</b>	<b>2,449</b>	<b>1,099</b>	<b>483</b>	<b>853</b>	<b>440</b>
2020 LGR Forecast <sup>1</sup>	4,586	3,729	308	2,060	608

Date	Proportion of brood acquisition over season				Summer
	Dworshak Trap	Kooskia Trap	NPTH Trap	Red River	Powell <sup>2</sup>
3-May	0.000	0.000	0.000	0.000	0.00
10-May	0.000	0.000	0.000	0.000	0.00
17-May	0.000	0.000	0.010	0.000	0.00
24-May	0.000	0.013	0.020	0.000	0.00
31-May	0.000	0.037	0.030	0.000	0.00
7-Jun	0.000	0.409	0.140	0.010	0.00
14-Jun	0.000	0.604	0.220	0.080	0.00
21-Jun	0.000	0.679	0.370	0.170	0.05
28-Jun	0.000	0.704	0.480	0.340	0.13
5-Jul	0.080	0.855	0.580	0.550	0.33
12-Jul	0.230	0.929	0.730	0.680	0.42
19-Jul	0.430	0.968	0.800	0.730	0.46
26-Jul	0.630	1.000	0.890	0.740	0.47
2-Aug	0.820	1.000	0.940	0.760	0.47
9-Aug	1.000	1.000	0.940	0.770	0.48
16-Aug	1.000	1.000	1.000	0.800	0.50
23-Aug	1.000	1.000	1.000	0.900	0.51
30-Aug	1.000	1.000	1.000	1.000	0.63
6-Sep	1.000	1.000	1.000	1.000	0.88
13-Sep	1.000	1.000	1.000	1.000	1.00
20-Sep	1.000	1.000	1.000	1.000	1.00
27-Sep	1.000	1.000	1.000	1.000	1.00

<sup>1</sup> 2- and 3-ocean returns only. Dworshak forecast includes Clearwater Hatchery NF Clearwater release and Dworshak NF Clearwater release. Kooskia forecast includes Clearwater Hatchery Clear Creek release and Kooskia Hatchery Clear Creek release.

<sup>2</sup> Based on Crooked River timing.

**FULL PRODUCTION**

**Table 2.3b.** BY 2020 SMOLT - Sp/Su Chinook Spawning and Trapping Plan for FULL PRODUCTION

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGD
<b>Spring</b>											
DNFH - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)	2,168,101	3,924	553	553	8.0%	1,203	6/15-9/15	2,561
Total				2,168,101		553	553		1,203		2,561
KNFH-NPT	KNFH	KNFH	Kooskia NFH	993,040	3,661	272	272	12.1%	619		1,976
Total				993,040		272	272		619		1,976
NPTHC	DNFH	DNFH	Trans. to NPTH-NPTH	265,482	3,924	68	68	8.0%	148		184
			Trans. to NPTH-Lolo Creek	238,934	3,924	61	61	8.0%	133		99
Total				504,415		129	129		281		283
CFH-LSRCP	SFCIw	CFH	Red River	1,558,725	3,850	405	405	5.0%	853	6/7-9/6	2,060
	DNFH		NF Clearwater-CFH (Baffle)	473,706	3,850	124	124	5.0%	262	7/5-8/9	2,025
	DNFH		NF Clearwater-CFH (Regular)	389,681	3,850	102	102	5.0%	215	7/5-8/9	
	DNFH		Selway River-Lower	487,102	3,850	127	127	5.0%	268	7/5-8/9	1,071
	KNFH/DNFH		Clear Creek	876,783	3,850	228	228	5.0%	480	5/24-7/26	1,753
Total				3,785,997		986	986		2,078		6,909
Spring Smolt Grand Total				7,451,553		1,940	1,940		4,181		11,729
<b>Summer</b>											
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond (SUM)	814,598	3,900	209	209	5.0%	440	6/21-9/13	608
Summer Smolt Grand Total				814,598		209	209		440		608

**FULL PRODUCTION**

**Table 2.3c.** BY 2020 PARR and PRE-SMOLT - Sp/Su Chinook Spawning and Trapping Plan

Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGD
<b>Spring</b>												
DNFH	Parr	DNFH	DNFH	Selway River-Upper	394,200	3,924	101	101	8.0%	220		
Total					394,200		101	101		220		0
NPTHC	Pre-Smolt	NPTHC	NPTHC	Newsome Cr (SF Clw)	108,824	3,983	28	28	5.0%	59		17
	Pre-Smolt	NPTHC		Lolo Cr (Clw)	217,647	3,983	55	55	5.0%	116		8
	Parr	NPTHC		Meadow Cr (Selway)	580,393	3,983	146	146	5.0%	308		
Total					906,864		229	229		483		25
Spring Parr/Pre-smolt Grand Total					1,301,064		330	330		703		25

**FULL PRODUCTION**

**Table 2.3d.** BY2020 Sp/Su Chinook Spawning and Trapping Plan Summarized by Trapping Facility for FULL PRODUCTION

Brood Collection Site	Female Spawn Goal	Male Spawn Goal	Total Trapping Goal	Projected Returns to LGD
<i>Spring</i>				
DNFH	1,136	1,136	2,449	4,586
KNFH	500	500	1,099	3,729
SFCIw	405	405	853	2,060
NPTHC	229	229	483	308
<i>Summer</i>				
Pow/SFSR	209	209	440	608

**BASE US v OR PRODUCTION**

**Table 2.3e.** BY 2020 SMOLT - Sp/Su Chinook Spawning and Trapping Plan for BASE US v OR PRODUCTION

Date	Spring				Summer
	Dworshak Trap	Kooskia Trap	NPTH Trap	Red River Trap	Powell
3-May					
10-May					
17-May			5		
24-May		13	10		
31-May		38	14		
7-Jun		426	68	7	
14-Jun		630	106	59	
21-Jun		708	179	125	22
28-Jun		734	232	249	57
5-Jul	112	892	280	403	145
12-Jul	322	969	353	498	185
19-Jul	603	1,009	386	535	202
26-Jul	883	1,043	430	542	207
2-Aug	1,150		454	557	207
9-Aug	1,402		454	564	211
16-Aug			483	586	220
23-Aug			483	660	224
30-Aug			483	733	277
6-Sep				733	387
13-Sep					440
20-Sep					
27-Sep					
<b>Total</b>	<b>1,402</b>	<b>1,043</b>	<b>483</b>	<b>733</b>	<b>440</b>
2020 LGR Forecast <sup>1</sup>	4,586	3,729	308	2,060	608

Date	Proportion of brood acquisition over season				Summer
	Dworshak Trap	Kooskia Trap	NPTH Trap	Red River Trap	Powell <sup>2</sup>
3-May	0.000	0.000	0.000	0.000	0.00
10-May	0.000	0.000	0.000	0.000	0.00
17-May	0.000	0.000	0.010	0.000	0.00
24-May	0.000	0.013	0.020	0.000	0.00
31-May	0.000	0.037	0.030	0.000	0.00
7-Jun	0.000	0.409	0.140	0.010	0.00
14-Jun	0.000	0.604	0.220	0.080	0.00
21-Jun	0.000	0.679	0.370	0.170	0.05
28-Jun	0.000	0.704	0.480	0.340	0.13
5-Jul	0.080	0.855	0.580	0.550	0.33
12-Jul	0.230	0.929	0.730	0.680	0.42
19-Jul	0.430	0.968	0.800	0.730	0.46
26-Jul	0.630	1.000	0.890	0.740	0.47
2-Aug	0.820	1.000	0.940	0.760	0.47
9-Aug	1.000	1.000	0.940	0.770	0.48
16-Aug	1.000	1.000	1.000	0.800	0.50
23-Aug	1.000	1.000	1.000	0.900	0.51
30-Aug	1.000	1.000	1.000	1.000	0.63
6-Sep	1.000	1.000	1.000	1.000	0.88
13-Sep	1.000	1.000	1.000	1.000	1.00
20-Sep	1.000	1.000	1.000	1.000	1.00
27-Sep	1.000	1.000	1.000	1.000	1.00

<sup>1</sup> 2- and 3-ocean returns only

<sup>2</sup> Based on Crooked River timing.

**BASE US v OR PRODUCTION**

**Table 2.3f.** BY 2020 PARR and PRE-SMOLT - Sp/Su Chinook Spawning and Trapping Plan

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGD
<b>Spring</b>											
DNFH - LSRCP	DNFH	DNFH	NF Clearwater (DNFH)	1,379,701	3,924	352	352	8.0%	766	6/15-9/15	2,561
Total				1,379,701		352	352		766		2,561
KNFH-NPT	KNFH	KNFH	Kooskia NFH	993,376	3,661	272	272	12.1%	619		1,976
Total				993,376		272	272		619		1,976
NPTHC	DNFH	DNFH	Trans. to NPTH-NPTH	265,482	3,924	68	68	8.0%	148		184
			Trans. to NPTH-Lolo Creek	0	3,924	0	0	8.0%	0		99
Total				265,482		68	68		148		283
CFH-LSRCP	SFClw	CFH	Red River	1,339,529	3,850	348	348	5.0%	733	6/7-9/6	2,060
	DNFH		NF Clearwater-CFH (Baffle)	0	3,850	0	0	5.0%	0	7/5-8/9	2,025
	DNFH		NF Clearwater-CFH (Regular)	0	3,850	0	0	5.0%	0	7/5-8/9	
	DNFH		Selway River-Lower	487,102	3,850	127	127	5.0%	268	7/5-8/9	1,071
KNFH/DNFH	Clear Creek	773,274	3,850	201	201	5.0%	424	5/24-7/26	1,753		
Total				2,599,905		676	676		1,425		6,909
Spring Grand Total				5,238,463		1,368	1368		2,958		11,729
<b>Summer</b>											
CFH-LSRCP	Pow/SFSR	CFH	Powell Pond	814,598	3,900	209	209	5.0%	440	6/21-9/13	608
Summer Grand Total				814,598		209	209		440		608

**BASE US v OR PRODUCTION**

**Table 2.3g.** BY 2020 Sp/Su Chinook Spawning and Trapping Plan Summarized by Trapping Facility for BASE US v OR PRODUCTION

Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Green Egg Goal	Green Egg Fecundity	Female Spawn Goal	Male Spawn Goal	Holding Mortality	Total Trapping Goal	Estimated Trapping Dates	Projected Returns to LGD
<b>Spring</b>												
DNFH	Parr	DNFH	DNFH	Selway River-Upper	394,200	3,924	101	101	8.0%	220		
Total					394,200		101	101		220		0
NPTHC	Pre-Smolt	NPTHC	NPTHC	Newsome Cr (SF Clw)	108,824	3,983	28	28	5.0%	59		17
	Pre-Smolt	NPTHC		Lolo Cr (Clw)	217,647	3,983	55	55	5.0%	116		8
	Parr	NPTHC		Meadow Cr (Selway)	580,393	3,983	146	146	5.0%	308		
Total					906,864		229	229		483		25
Spring Grand Total					1,301,064		330	330		703		25

**BASE US v OR PRODUCTION**

**Table 2.3h.** BY2020 Sp/Su Chinook Spawning and Trapping Plan Summarized by Trapping Facility for BASE US v OR PRODUCTION

Brood Collection Site	Female Spawn Goal	Male Spawn Goal	Total Trapping Goal	Projected Returns to LGD
<b><i>Spring</i></b>				
DNFH	648	648	1,402	4,586
KNFH	473	473	1,043	3,729
SFCIw	348	348	733	2,060
NPTHC	229	229	483	308
<b><i>Summer</i></b>				
Pow/SFSR	209	209	440	608

**2.3.2. Trap Operations and Production Planning for 2020 (Smolts and Parr/Pre-Smolt BY2020) – NARRATIVE**

Discuss if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Juvenile Release Location	Plan for 2020 (BY 2020)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Dworshak National Fish Hatchery Ladder/Trap (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	As of BY2019 no testing for WD is conducted on the adults.	NC	NC	NC	NC
Selway River Upper (Dwor-Parr)	As of BY2019 no testing for WD is conducted on the adults.	NC	NC	NC	NC
Nez Perce Tribal Hatchery (Dwor-Smolt)	As of BY2019 no testing for WD is conducted on the adults.	NC	NC	NC	NC
Lolo (Dwor-Smolt)	As of BY2019 no testing for WD is conducted on the adults.	NC	NC	NC	NC
NF Clearwater-CFH (Baffle) (Dwor)	As of BY2019 no testing for WD is conducted on the adults.				
NF Clearwater-CFH (Regular) (Dwor)	As of BY2019 no testing for WD is conducted on the adults.				
Selway River Lower (Dwor)	As of BY2019 no testing for WD is conducted on the adults.				
Clear Creek (Dwor)	As of BY2019 no testing for WD is conducted on the adults.				

Juvenile Release Location	Plan for 2020 (BY 2020)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Kooskia National Fish Hatchery Trap (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koos)	As of BY2019 no testing for WD is conducted on the adults.	Kooskia Hatchery will collect and transport broodstock to DNFH to cover the spawning needs for the Kooskia Hatchery. Broodstock for the CFH will then be filled with CFH assisting in all handling and transport to CFH. Any additional adults trapped will be transported to DNFH or NPTH if needed to meet broodstock goals.	NC	NC	NC
Clear Creek (Koos)					
<i>Nez Perce Tribal Hatchery Trap (SOP Section 2.4)</i>					
Lolo Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Meadow Creek Selway (NPTH-Parr)	NC	NC	NC	NC	NC
<i>Red River and Crooked River Traps (SOP Section 2.5)</i>					
Red River (SFClw)	NC	NC	NC	NC	NC
<i>Powell Trap (SOP Section 2.5)</i>					
Powell (Pow-Summer)	NC	NC	NC	NC	NC

2.4. Early Rearing and Marking Plan for 2020 (Smolts BY 2019, Parr/Pre-Smolt BY2019)

**BY2019 SMOLTS - Spring/Summer Chinook Goals for Release in 2021**

Action in 2020	Brood/Release Year	Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal	
Early Rearing and Marking	BY2019 RY2021	<b>Spring</b>					
		DNFH - LSRCP	DNFH/RR <sup>1</sup>	DNFH		NF Clearwater (DNFH)	1,650,000
		Total					1,650,000
		KNFH-NPT	KNFH	KNFH		Kooskia NFH	650,000
		Total					650,000
		NPTHC	DNFH	NPTH		Trans. to NPTH from DNFH-NPTH	200,000
			DNFH			Trans. to NPTH from DNFH-Lolo Creek	180,000
		Total					380,000
		CFH-LSRCP	SFCIw/LWS 1/RR <sup>1</sup>	CFH		Red River	1,280,000
						NF Clearwater-CFH (Baffle)	389,000
						NF Clearwater-CFH (Regular)	320,000
						Selway River-Lower	400,000
						Clear Creek	720,000
		Total					3,109,000
		Spring Grand Total					5,789,000
		<b>Summer</b>					
CFH-LSRCP	Pow/SFSR	CFH		Powell Pond (SUM)	640,000		
Summer Grand Total					640,000		

<sup>1</sup> RR represents the Rapid River brood collection site

<sup>2</sup> LWS represents the Little White Salmon brood collection site

**BY2019 PARR and PRE-SMOLT - Spring Chinook Goals for Release in 2020**

Action in 2020	Brood/Release Year	Hatchery Program	Life Stage	Brood Collection Site	Rearing Facility	Release Site	Smolt Release Goal
Early Rearing, Marking and Release	BY2019 RY2020	<b>Spring</b>					
		DNFH	Parr	DNFH	DNFH	Selway River-Upper	300,000
		Total					300,000
		NPTHC	Pre-Smolt	LWS <sup>1</sup>	NPTH	Newsome Cr (SF Clw)	75,000
			Pre-Smolt			Lolo Cr (SF Clw)	150,000
		NPTHC	Parr			Meadow Cr (Selway)	400,000
		Total					625,000
Spring Grand Total					925,000		

<sup>1</sup> LWS represents the Little White Salmon brood collection site

**2.4.1. Early Rearing and Marking Plan for 2020 (Smolts BY 2019, Parr/Pre-Smolt BY2019) – TOTALS**

**Table 2.4a.** BY 2019 Sp/Su Chinook Salmon - Early Rearing Inventory for smolt releases in 2021 (including anticipated set out)

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Release Goals for 2021	Size (FPP)	Inventory to Date			Comment
							Date	Goal <sup>3</sup>	Actual	
<b>Spring</b>										
DNFH	SpCS	DNFH/RR <sup>1</sup>	DNFH	NF Clearwater (DNFH)	1,650,000	20.0	12/31/19	1,864,708	1,861,634	390,448 RR eggs
Totals					1,650,000			1,864,708	1,861,634	
KNFH	SpCS	KNFH	KNFH	Kooskia NFH	650,000		12/31/2019		699,969	
Totals					650,000			0	699,969	
NPTH	SpCS	DNFH	NPTH	Trans. to NPTH from DNFH-NPTH	200,000	20.0	12/31/2019		201,348	
		DNFH		Trans. to NPTH from DNFH-Lolo Creek	180,000	20.0	12/31/2019		219,412	
Totals					380,000			0	420,760	
CFH	SpCS	SFCLw/LWS <sup>2</sup> /RR <sup>1</sup>	CFH	Red River	1,280,000	16.0	12/31/2019	1,333,333	1,225,088	59k LWS, 301k RR eggs
		SFCLw		NF Clearwater-CFH (Baffle)	389,000	16.0	12/31/2019	405,208	382,628	
		SFCLw		NF Clearwater-CFH (Regular)	320,000	16.0	12/31/2019	333,333	196,979	
		LWS <sup>2</sup>		Selway River-Lower	400,000	16.0	12/31/2019	416,667	404,563	
		KNFH/DNFH		Clear Creek	720,000	16.0	12/31/2019	750,000	698,314	
Totals					3,109,000			3,238,541	2,907,572	
Spring Grand Total					5,789,000			5,103,249	5,889,935	
<b>Summer</b>										
CFH	SuCS	Pow/SFSR	CFH	Powell Pond (SUM)	640,000		12/31/2019	666,667	410,418	
Totals					640,000			666,667	410,418	
Summer Grand Total					640,000			666,667	410,418	

<sup>1</sup> RR represents the Rapid River brood collection site

<sup>2</sup> LWS represents the Little White Salmon brood collection site

<sup>3</sup> Estimated fish needed in vats to reach eventual smolt release goals, based on brood calculator exclusive of the buffer.

**Table 2.4b.** BY 2019 SMOLTS - Sp/Su Chinook Projected Marking of BY 2019 juveniles to be released in 2021.

Hatchery Program	Run	Brood Collection Site	Rearing Facility	Release Site	Release Goals for 2021	Likely Marking Date(s)	Inventory to Date		Projected Marking				Projected PIT Tags				
							Date	Number	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
									No CWT	CWT	CWT	No CWT		CSS	LSRCP	USFWS	BPA
<b>Spring</b>																	
DNFH	SpCS	DNFH/RR <sup>1</sup>	DNFH	NF Clearwater (DNFH)	1,650,000	Sept	12/31/2019	1,861,634	1,741,634	120,000			42,000	42,000			
Totals					1,650,000			1,861,634	1,741,634	120,000	0	0	42,000	42,000	0	0	0
KFH	SpCS	KNFH	KNFH	Kooskia NFH	650,000	Late May	12/31/2019	699,969	495,000	100,000		55,000	8,000			6,000	
Totals					650,000			699,969	495,000	100,000	0	55,000	8,000	0	0	6,000	0
NPTH	SpCS	DNFH	NPTH	Trans. to NPTH from DNFH-NPTH	200,000	Late Aug	12/31/2019	201,348	0	34,000	167,348	0	600				600
		DNFH		Trans. to NPTH from DNFH-Lolo Creek	180,000	Late Aug	12/31/2019	219,412	159,412	60,000	0	0	1,000				1,000
Totals					380,000			420,760	159,412	94,000	167,348	0	1,600	0	0	0	1,600
CFH	SpCS	SFClw/LWS <sup>2</sup> /RR <sup>1</sup>	CFH	Red River	1,280,000	4/26-5/4	12/31/2019	1,225,088	1,105,088	120,000	0	0	17,100	5,100	12,000	0	0
		SFClw		NF Clearwater-CFH (Baffle)	389,000	5/14-6/8	12/31/2019	382,628	0	382,628	0	0	17,100	0	17,100	0	0
		SFCLw		NF Clearwater-CFH (Regular)	320,000	5/14-6/8	12/31/2019	196,979	196,979	0	0	0	0	0	0	0	0
		LWS <sup>2</sup>		Selway River-Lower	400,000	5/14-6/8	12/31/2019	404,563	149,563	120,000	135,000	0	17,100	5,100	12,000	0	0
		KNFH/DNFH		Clear Creek	720,000	5/14-6/8	12/31/2019	698,314	578,314	120,000	0	0	9,800	3,500	6,300	0	0
Totals					3,109,000			2,907,572	2,029,944	742,628	135,000	0	61,100	13,700	47,400	0	0
Spring Grand Total					5,789,000			5,889,935	4,425,990	1,056,628	302,348	55,000	112,700	55,700	47,400	6,000	1,600
<b>Summer</b>																	
CFH	SuCS	Pow/SFSR	CFH	Powell Pond (SUM)	640,000	5/14-6/8	12/31/2019	410,418	85,209	120,000	120,000	85,209	25,500	13,500	12,000	0	0
Totals					640,000			410,418	85,209	120,000	120,000	85,209	25,500	13,500	12,000	0	0
Summer Grand Totals					640,000			410,418	85,209	120,000	120,000	85,209	25,500	13,500	12,000	0	0
Spring/Summer Grand Total					6,429,000			6,300,353	4,511,199	1,176,628	422,348	140,209	138,200	69,200	59,400	6,000	1,600

<sup>1</sup> RR represents the Rapid River brood collection site

<sup>2</sup> LWS represents the Little White Salmon brood collection site

**Table 2.4c.** BY2019 PARR and PRE-SMOLT - Sp Chinook Salmon Inventory to Date by Projected Mark Type for release in 2020.

Hatchery Program	Run/ Life Stage	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date		Projected Marking & Tagging				PIT Tags					
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source				
							No CWT	CWT	CWT	No CWT		CSS	LSRCP	USFWS	BPA	
DHFH	Parr	DNFH	DNFH	Selway River-Upper	12/31/2019	322,007				294,636	0					
Total						322,007	0	0	0	294,636	0	0	0	0	0	0
NPTH	Pre-Smolt	LWS <sup>1</sup>	NPTH	Newsome Cr (SF Clw)	12/31/2019	736,415	0	0	75,000	0	3,000					3,000
	Pre-Smolt			Lolo Cr (SF Clw)			0	0	150,000	0	6,000				6,000	
	Parr			Meadow Cr (Selway)			0	0	400,000	0	5,000				5,000	
Total						736,415	0	0	625,000	0	14,000	0	0	0	14,000	
Spring Grand Total						1,058,422	0	0	625,000	294,636	14,000	0	0	0	14,000	

<sup>1</sup> LWS represents the Little White Salmon brood collection site

**2.4.2. Early Rearing and Marking Plan for 2020 (Smolts BY 2019, Parr/Pre-Smolt BY2019) – NARRATIVE**

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - fish health issues, action taken and how was the treatment implemented, anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. schedule changes, planned changes to fish handling or movement, marking schedule, raceway loading for PBT etc.
- **Current Inventory** - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is significantly above or below the projected numbers, then explain why.

Release Location	Plan for 2020 (Smolts BY 2019, Parr/Pre-Smolt BY2019)				
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Dworshak National Fish Hatchery (SOP Section 2.2)</i>					
NF Clearwater-DNFH (Dwor)	NC	NC	Fish will be ponded using 1 screen	NC	NC
Selway River Upper (Dwor-Parr)	NC	NC	Fish will be ponded using 1 screen	NC	NC
Nez Perce Tribal Hatchery (Dwor)	Full term rearing at NPTH	Due to chiller failure at Dworshak eyed eggs for this group of fish production was transported to NPTH November 2019	NPTH and Lolo programs, transferred early as eyed eggs November 2019, due to Chiller breakdown at DNFH.	NC	NC
Lolo Creek (Dwor)	Full term rearing at NPTH	Due to chiller failure at Dworshak eyed eggs for this group of fish production was transported to NPTH November 2019	Full term rearing at NPTH	Will be marked at NPTH	NC
<i>Kooskia National Fish Hatchery (SOP Sections 2.3)</i>					
Kooskia National Fish Hatchery (Koos)	NC	NC	NC	Juvenile fish marking will be done by the NPT tagging personnel in late May during move from the vats to the Burrows ponds. PIT tagging will be done in October	NC

Release Location	Plan for 2020 (Smolts BY 2019, Parr/Pre-Smolt BY2019)				
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Nez Perce Tribal Hatchery (SOP Section 2.4)</i>					
Lolo Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Newsome Creek (NPTH-Pre-Smolt)	NC	NC	NC	NC	NC
Meadow Creek Selway (NPTH-Parr)	NC	NC	NC	NC	NC
<i>Clearwater Fish Hatchery (SOP Sections 2.5)</i>					
Red River (SFClw/Koos/Dwor)	NC	NC	NC	NC	Filled 25% with Rapid River and 5% with LWS.
NF Clearwater - Baffle (Dwor)	NC	NC	NC	NC	NC
NF Clearwater – Regular (Dwor)	NC	NC	NC	NC	Due to BY2019 brood shortage release will be 40% below target
Selway River-Lower (Dwor)	NC	NC	NC	NC	Filled 100% with LWS
Clear Creek (Koos/Dwor)	NC	NC	NC	NC	NC
Powell (Pow/SFSR-Summer)	NC	NC	NC	NC	Due to BY2019 brood shortage release will be 37% below target

### 3. Coho Salmon

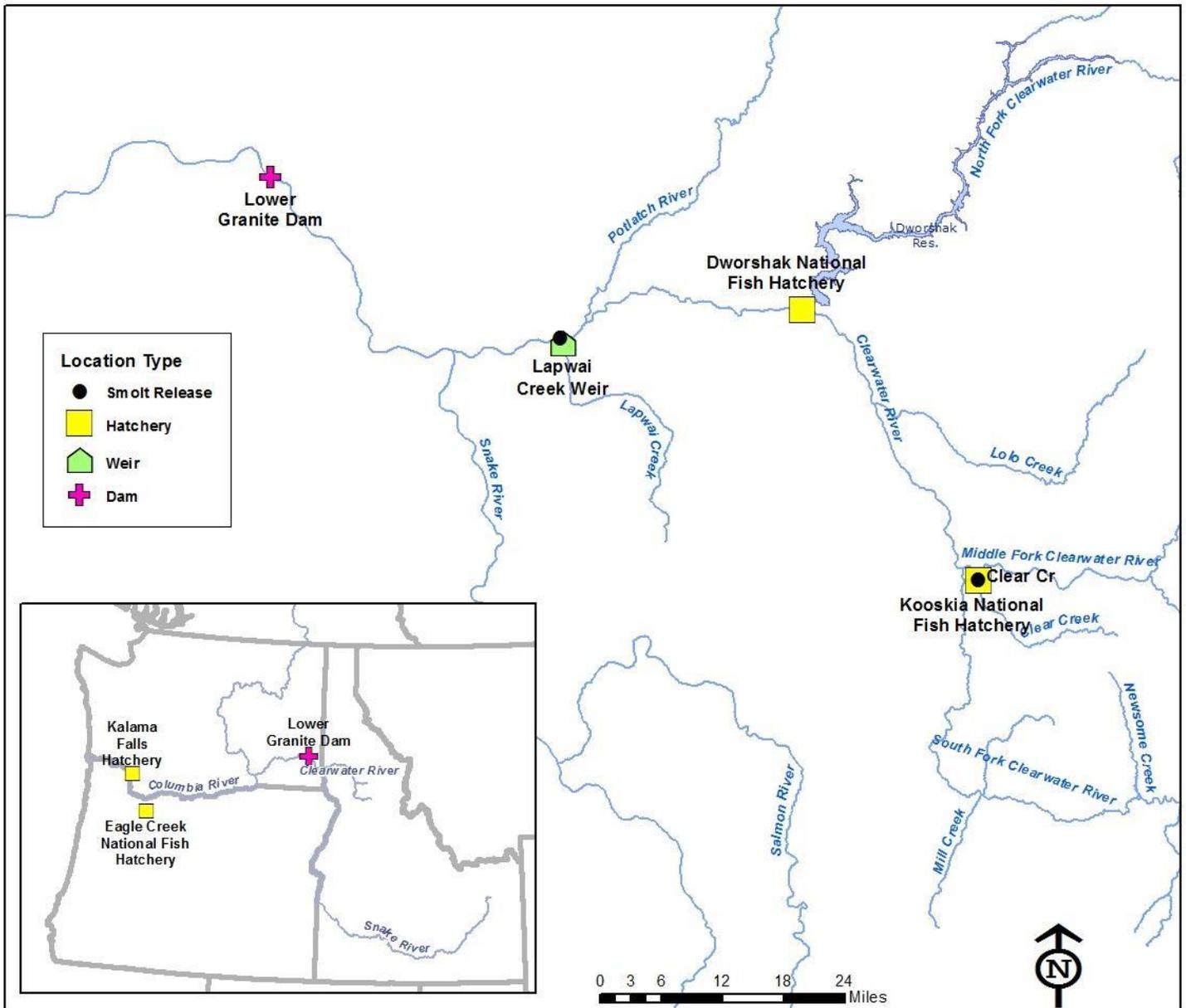
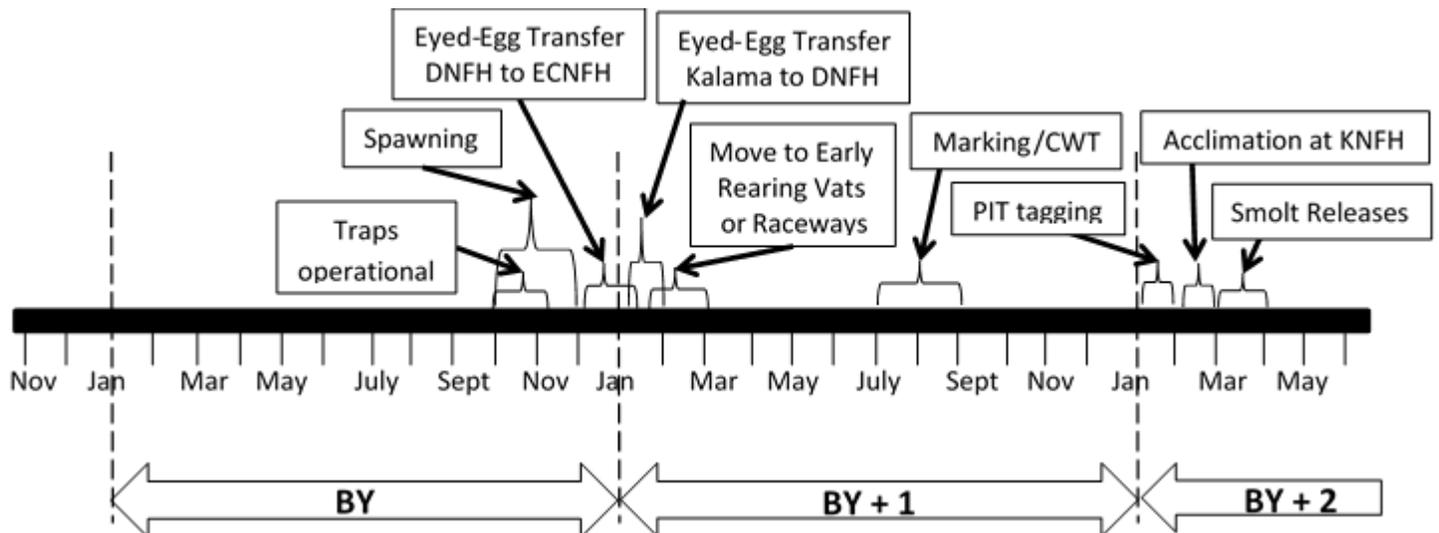


Figure 3.1. Coho trapping, hatchery facilities and smolt release locations.

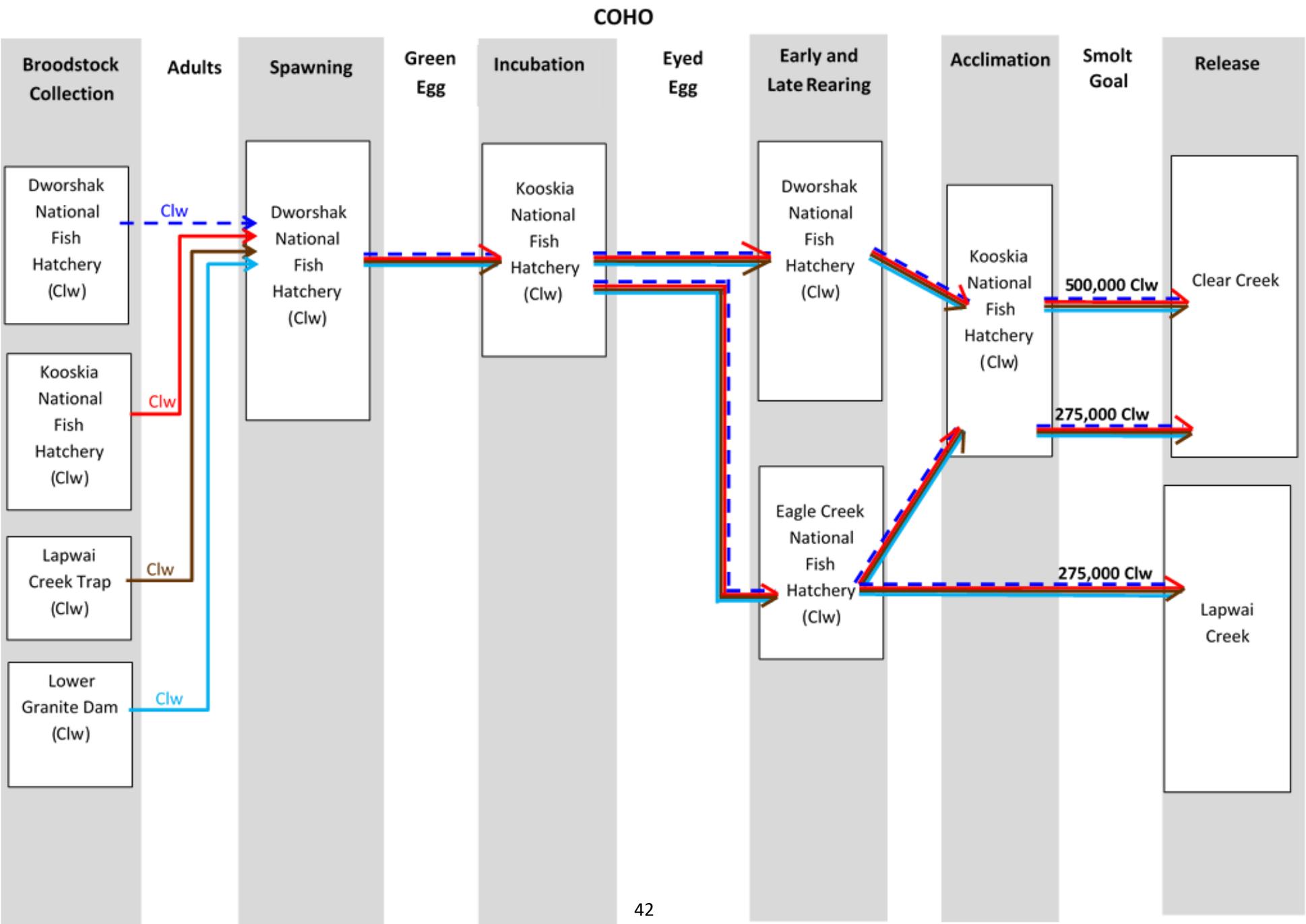
**Table 3.1.** BY2018 SMOLTS - Coho Release Goals for 2020

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2020 Smolt Release Goal
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	400,000
Total					400,000
KAL	Coho	Kalama	DNFH	Clear Creek	100,000
Total					100,000
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	275,000
	Coho			Clear Creek	275,000
Total					550,000
Grand Total					1,050,000

**3.1. Timeline and Flowchart for Coho Production**



**Figure 3.2.** Timeline for Coho Production. Date ranges with black labels are shown to include all facilities' operations.



**Figure 3.3.** Coho movements in Clearwater. Numbers represent BY2020 releases.

### 3.2. Releases in 2020 (Smolt BY 2018)

#### 3.2.1. Releases in 2020 (Smolt BY 2018) – Totals

**Table 3.2a.** BY2018 SMOLTS - Coho Salmon inventories by life stage, smolt release goals, and projected releases in 2020.

Rearing Facility	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Smolt Release		
					Date	Number	Number	(FPP)	Dates	Number	(FPP)
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	1/6/2020	562,238	400,000	20.0	3/1/20	555,000	20.0
Total						562,238	400,000			555,000	20.0
KAL	Coho	Kalama	DNFH	Clear Creek	1/6/2020	129,000	100,000	20.0	3/1/20	125,000	20.0
Total						129,000	100,000			125,000	20.0
ECNFH	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	1/10/2020	297,423	275,000	20.0	3/1/20	290,000	20.0
	Coho			Clear Creek	1/10/2020	297,422	275,000	20.0	3/1/20	290,000	20.0
Total						594,845	550,000			580,000	
Grand Total						1,286,083	1,050,000			1,260,000	

**Table 3.2b.** BY2018 SMOLTS - Coho Salmon Inventory to Date by Mark Type for release in 2020.

Rearing Facility	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date						PIT Tags				
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
							No CWT	CWT	CWT	No CWT		Mitchell Act	PCSRF	IPC	BPA
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	1/6/2020	562,238	0	0	63,023	499,215	5,000	5,000	0	0	0
Total						562,238	0	0	63,023	499,215	5,000	5,000	0	0	0
KAL	Coho	Kalama	DNFH	Clear Creek	1/6/2020	129,000	0	0	104,325	24,675	0	0	0	0	0
Total						129,000	0	0	104,325	24,675	0	0	0	0	0
ECNFH	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	1/10/2020	297,423	0	0	30,007	267,416	5,000	5,000	0	0	0
	Coho			Clear Creek	1/10/2020	297,422	0	0	30,028	267,394	5,000	5,000	0	0	0
Total						594,845	0	0	60,035	534,810	10,000	10,000	0	0	0
Grand Total						1,286,083	0	0	227,383	1,058,700	15,000	15,000	0	0	0

**3.2.2. Releases in 2020 (Smolt BY 2018) – Total**

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt/Egg Release Targets-** e.g. were you below goal, was your size at release different than SOP target etc.
- **Fish/Egg Health-** any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases-** e.g. timing, trucking issues, site access etc.

Location	Plan for 2020		Changes/Conditions that Occurred 2019-Early 2020		
	Release Target Smolt BY18	Transport/Release Smolt BY18	Fish Feeding Smolt BY18	Fish/Egg Health Smolt BY18	Marking Smolt BY18
<i>Dworshak National Fish Hatchery (SOP Section 3.2)</i>					
Clear Creek - DNFH (Clw)				NC	
<i>Eagle Creek National Fish Hatchery (SOP Section 3.3)</i>					
Lapwai Creek (Clw)				NC	
Clear Creek (Clw)				NC	

### 3.3. Trap Operations and Production Planning for 2020 (Smolt BY 2020)

#### 3.3.1. Trap Operations and Production Planning for 2020 (Smolt BY 2020) – TOTALS

**Table 3.3a.** BY 2020 SMOLTS - Coho Smolt Production Goals for Release in 2022.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2022 Smolt Release Goal
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	500,000
Total					500,000
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	275,000
	Coho			Clear Creek	275,000
Total					550,000
<b>Grand Total</b>					<b>1,050,000</b>

#### 3.3.2. Trap Operations and Production Planning for 2020 (Smolts BY 2020) – NARRATIVE

Discuss if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Plan for 2020 (BY 2020)					
Location	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Primary Trapping Facilities (SOP Section 3.2) <sup>1</sup></i>					
Kooskia National Fish Hatchery Trap (Clw)	As of BY2019 no testing for WD is conducted on the adults.				
Lapwai Creek Trap (Clw)	As of BY2019 no testing for WD is conducted on the adults.				
<i>Secondary Trapping Facilities (SOP Section 3.2) <sup>1</sup></i>					
Dworshak National Fish Hatchery Trap (Clw)	As of BY2019 no testing for WD is conducted on the adults.				
Lower Granite Dam (Clw)	As of BY2019 no testing for WD is conducted on the adults.				

<sup>1</sup> If broodstock collection at primary and secondary trapping locations falls short of goals, green eggs from Eagle Creek National Fish hatchery and/or Kalama Fish Hatchery may be used as a source.

**3.4. Early Rearing and Marking Plan for 2020 (Smolts BY 2019)**

**BY2019 SMOLTS - Coho Release Goals for 2021**

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2021 Smolt Release Goal
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek	500,000
Total					500,000
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek	275,000
	Coho			Clear Creek	275,000
Total					550,000
<b>Grand Total</b>					<b>1,050,000</b>

**3.4.1. Early Rearing and Marking Plan for 2020 (Smolts BY 2019) – TOTALS**

**Table 3.4a.** BY 2019 Coho - Early Rearing Inventory (including anticipated set out)

Rearing Hatchery	Species	Stock	Inventory to Date		
			Date	Goal <sup>1</sup>	Actual
DNFH	Coho	Clw	1/6	550,000	606,818
ECNFH	Coho	Clw	12/19	605,000	649,431

<sup>1</sup> Estimated fish needed in vats to reach eventual smolt release goals, based on brood calculator

**Table 3.4b.** BY 2019 SMOLTS - Coho Projected Marking of BY 2019 fish in 2020

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Likely Marking Date(s)	Release Goals for 2021	Inventory to Date		Projected Marking				PIT Tags <sup>1</sup>				
									Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
							Date	Number	No CWT	CWT	CWT	No CWT		Mitchell Act	LSRCP	IPC	BPA
NPT	Coho	LAP, DNFH, KNFH, LGR	DNFH	Clear Creek		500,000	1/6/2020	606,818	0	0	100,000	0	0				
Total						500,000		606,818	0	0	100,000	0	0	0	0	0	0
NPT	Coho	LAP, DNFH, KNFH, LGR	ECNFH	Lapwai Creek		275,000	12/19/19	324,715	0	0	30,000	0	0				
	Coho			Clear Creek	275,000	324,716		0	0	30,000	0	0					
Total						550,000		649,431	0	0	60,000	0	0	0	0	0	0
<b>Grand Total</b>						<b>1,050,000</b>		<b>1,256,249</b>	<b>0</b>	<b>0</b>	<b>160,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> PIT Tagging occurs in spring 2021

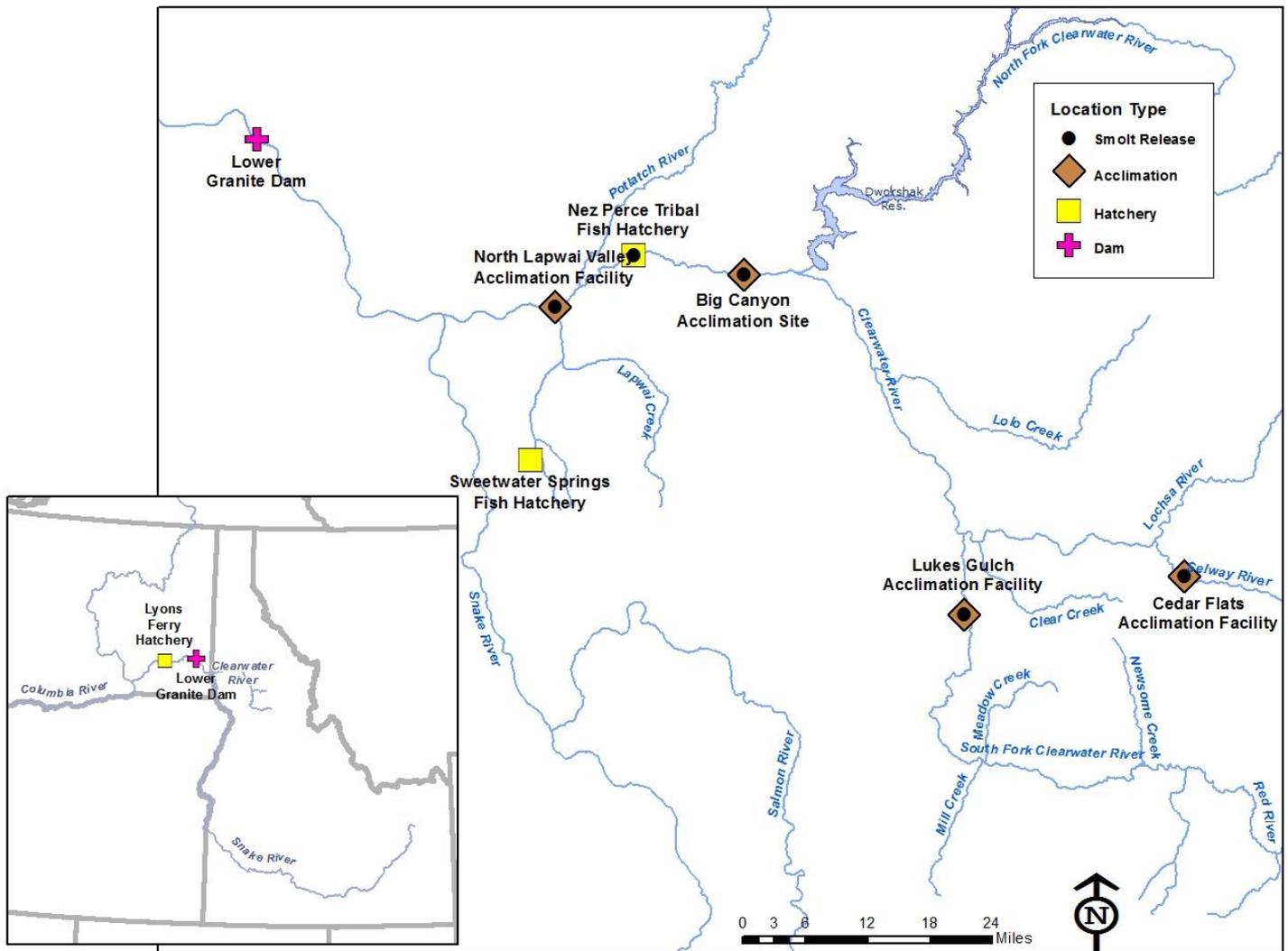
**3.4.2. Early Rearing and Marking Plan for 2020 (Smolts BY 2019) – NARRATIVE**

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - observed fish health issues, what action was taken and how was the treatment implemented, anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. schedule changes, planned changes to fish handling or movement, marking schedule, raceway loading for PBT etc.
- **Current Inventory** - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is significantly above or below the projected numbers, then explain why.

Release Location	Plan for 2020 (Smolts BY 2019)				
	Juvenile Fish Health	Fish Feeding	Rearing Conditions	Marking	Meets Release Target
<i>Dworshak National Fish Hatchery (SOP Section 3.2)</i>					
Clear Creek - DNFH (Clw)	NC		Due to chiller failure at Dworshak Coho eggs were moved to Kooskia Hatchery in December for incubation and early rearing. Anticipate transfer back to Dworshak in April following water shutdown/maintenance completion		
<i>Eagle Creek National Fish Hatchery (SOP Sections 3.3)</i>					
Clear Creek (Clw)	NC				
Lapwai Creek (Clw)	NC				

## 4. Fall Chinook



**Figure 4.1.** Fall Chinook Salmon hatchery and acclimation facilities, and sub-yearling release locations.

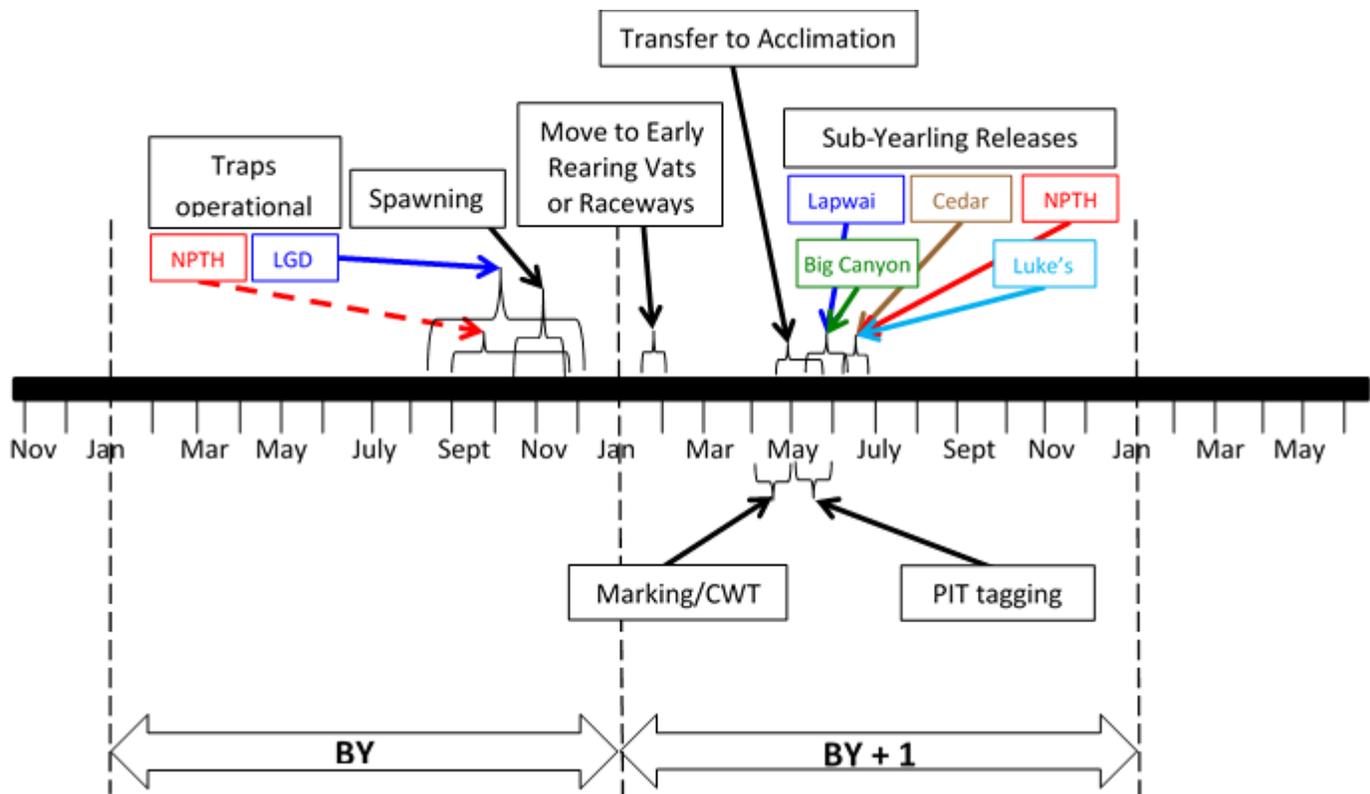
**Table 4.1.** Fall Chinook Goals for Release in 2020

**BY2019 SUB-YEARLINGS**

Hatchery Program	Brood Collection Site	Rearing Facility	Release Site	Sub-Yearling Release Goal
NPT	SnakeR	Lyons Ferry	Big Canyon Creek <sup>1</sup>	450,000
				200,000
Total				650,000
NPT	SnakeR	NPTH	NPTH	500,000
	SnakeR		N Lapwai Valley	200,000
	SnakeR		Lukes Gulch	350,000
	SnakeR		Cedar Flats	350,000
Total				1,400,000
Grand Total				2,050,000

<sup>1</sup> Two separate release goals at Big Canyon Creek (different release dates)

**4.1. Timeline and Flowchart for Fall Chinook Production**



**Figure 4.2.** Timeline for Sub-Yearling Fall Chinook Production. Date ranges with black labels are shown to include all facilities' operations. Color-coded labels identify activities that have variability in timing for the different facilities.

### FALL CHINOOK

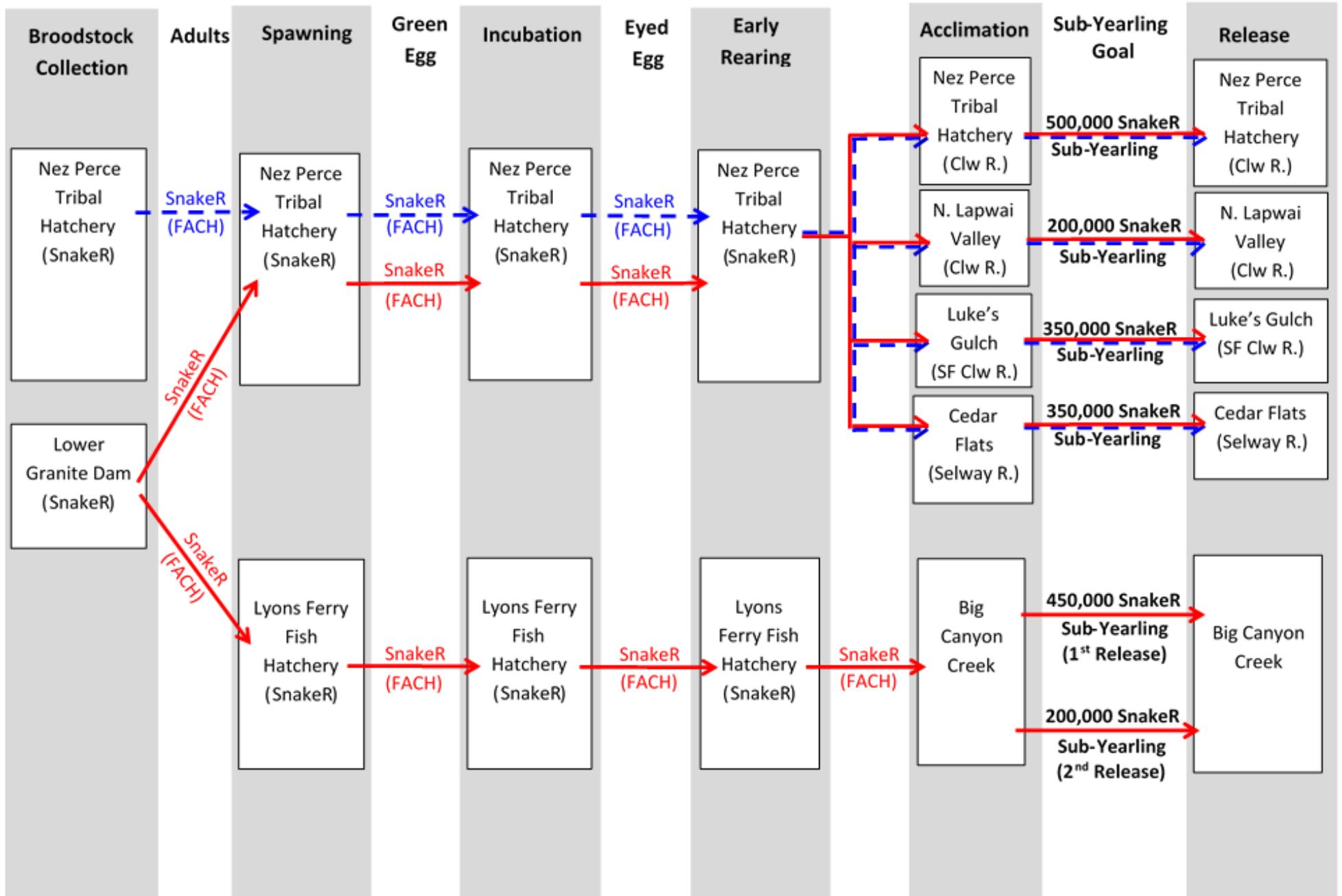


Figure 4.3. Fall Chinook movements in Clearwater. Numbers represent 2020 releases.

#### 4.2. Releases in 2020 (Sub-Yearling BY 2019)

##### 4.2.1. Releases in 2020 (Sub-Yearling BY 2019) – Totals

**Table 4.2a.** BY2019 SUB-YEARLINGS - Fall Chinook Salmon inventories by life stage, smolts release goals and projected releases in 2020.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory To Date		Release Goals		Projected Sub-Yearling Release		
					Date	Number	Number	(FPP)	Dates	Number	(FPP)
NPT	FACH	SnakeR	Lyons Ferry	Big Canyon Creek <sup>1</sup>	1/6/2020	468,200	450,000	50.0	5/14/20	452,000	50.0
					1/6/2020	211,498	200,000	50.0	6/5/2020	202,000	50.0
Total						679,698	650,000			654,000	
NPT	FACH	SnakeR	NPTH	NPTH	12/31/2019	737,079	500,000	50.0	6/15/2020	730,079	50.0
	FACH	SnakeR		N Lapwai Valley	12/31/2019	262,977	200,000	50.0	5/18/2020	260,977	50.0
	FACH	SnakeR		Lukes Gulch	12/31/2019	326,422	350,000	50.0	6/15/2020	323,422	50.0
	FACH	SnakeR		Cedar Flats	12/31/2019	305,770	350,000	50.0	6/15/2020	302,770	50.0
Total						1,632,248	1,400,000			1,617,248	
Grand Total						2,311,946	2,050,000			2,271,248	

<sup>1</sup> Two separate release goals at Big Canyon Creek (different release dates)

**Table 4.2b.** BY2019 SUB-YEARLINGS - Fall Chinook Salmon Inventory to Date by Mark Type for release in 2020.

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	Inventory to Date					PIT Tags <sup>2</sup>					
					Date	Total	Adipose Fin Clip		No Clip		Total # Tags	Funding Source			
							No CWT	CWT	CWT	No CWT		CSS	LSRCP	IPC	BPA
NPT	FACH	SnakeR	Lyons Ferry	Big Canyon Creek <sup>1</sup>	1/6/2020	452,000	0	200,000	0	252,000	11,000	11,000			
					1/6/2020	202,000		202,000	0	0	4,000				4,000
Total						654,000	0	402,000	0	252,000	15,000	11,000	0	0	4,000
NPT	FACH	SnakeR	NPTH	NPTH	12/31/2019	737,079	0	100,000		637,079	4,500				4,500
	FACH	SnakeR		N Lapwai Valley	12/31/2019	262,977	0	100,000		162,977	4,500				4,500
	FACH	SnakeR		Lukes Gulch	12/31/2019	326,422	0	100,000		226,422	4,500				4,500
	FACH	SnakeR		Cedar Flats	12/31/2019	305,770	0	100,000		205,770	4,500				4,500
Total						1,632,248	0	400,000	0	1,232,248	18,000	0	0	0	18,000
Grand Total						2,286,248	0	802,000	0	1,484,248	33,000	11,000	0	0	22,000

<sup>1</sup> Two separate release goals at Big Canyon Creek (different release dates)

<sup>2</sup> Projected marking numbers because marking/tagging occurs in April/May

#### 4.2.2. Releases in 2020 (Sub-Yearling BY 2019) - Narrative

Here are examples of things managers talk about for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Smolt Release Targets**- e.g. Were you below goal? Was you size at release different than SOP target? Did you depart from the mark plan?
- **Fish Health**- any epizootic history, anti-biotic treatments, was production culled at any point
- **Transportation/Releases**- e.g. timing, trucking issues, site access etc.

Release Location	Plan for 2020		Changes/Conditions that Occurred 2019-Early 2020		
	Release Target Sub-YrIng BY19	Transport/Release Sub-YrIng BY19	Fish Feeding Sub-YrIng BY19	Fish/Egg Health Sub-YrIng BY19	Marking Sub-YrIng BY19
<i>Nez Perce Tribal Hatchery (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (Clw R.)	NC	NC	NC	NC	NC
N. Lapwai Valley (Clw R.)	NC	NC	NC	NC	NC
Luke’s Gulch (SF Clw R.)	NC	NC	NC	NC	NC
Cedar Flats (Selway R.)	NC	NC	NC	NC	NC
<i>Lyons Ferry Fish Hatchery (SOP Section 4.3)</i>					
Big Canyon Creek Sub-Yearling (First Release) <sup>1</sup>	NC	NC	NC	NC	NC
Big Canyon Creek Sub Yearling (Second Release) <sup>1</sup>	New group to replace the yearling releases	NC	NC	NC	NC

<sup>1</sup> Two separate release goals at Big Canyon Creek (different release dates)

**4.3. Trap Operations and Production Planning for 2020**

**4.3.1. Trap Operations and Production Planning for 2020 – TOTALS**

**Table 4.3a.** BY 2020 SUB-YEARLINGS - Fall Chinook Production Goals for Release in 2021

Hatchery Program	Species	Brood Collection Site	Rearing Facility	Release Site	2021 Sub-Yearling Release Goal
FCAP	FACH	SnakeR	Lyons Ferry	Big Canyon Creek <sup>1</sup>	450,000
					200,000
Total					650,000
NPTH	FACH	Snake R.	NPTH	NPTH	500,000
	FACH	Snake R.		N Lapwai Valley	200,000
	FACH	Snake R.		Lukes Gulch	350,000
	FACH	Snake R.		Cedar Flats	350,000
Total					1,400,000
Grand Total					2,050,000

<sup>1</sup> Two separate release goals at Big Canyon Creek (different release dates)

**4.3.2. Trap Operations and Production Planning for 2020 (Sub-Yearling) – NARRATIVE**

Discuss if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

Rearing Location	Plan for 2020 (BY 2020)				
	Adult Fish Health	Trap Ops	Production target changes	Spawning protocol changes	Disposition of adults
<i>Lower Granite Dam Ladder/Trap (SOP Sections 4.2 and 4.3)</i>					
Nez Perce Tribal Hatchery (SnakeR)	NC	NC	NC	NC	NC
Lyons Ferry Fish Hatchery – Sub-Yearling (SnakeR)	NC	NC	NC	NC	NC
<i>Nez Perce Tribal Hatchery Trap (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (SnakeR)	NC	NC	NC	NC	NC

**4.4. Early Rearing and Marking Plan for 2020 (Sub-Yearling BY 2019)**

**4.4.1. Early Rearing and Marking Plan for 2020 (Sub-Yearling BY 2019) – NARRATIVE**

Here are examples of things managers were instructed to discuss for each release group, if there are departures from the norm (i.e., SOP). If no departure from the norm, enter NC for “No Change”.

- **Fish Health** - fish health issues, action taken and how was the treatment implemented, anticipated changes to normal fish health sampling or treatments
- **Fish feeding** - changes of diets of feed manufacturer, growth regimes etc.
- **Rearing conditions** - incubation, water temp, flow, rearing density changes
- **Marking** - e.g. schedule changes, planned changes to fish handling or movement, marking schedule, raceway loading for PBT etc.
- **Current Inventory** - . If projected marking lines up with the current inventory, then no comment is needed at this bullet (enter NC). If current inventory is significantly above or below the projected numbers, then explain why.

<b>Plan for 2020 (Sub-Yearling BY 2019)</b>					
<b>Release Location</b>	<b>Juvenile Fish Health</b>	<b>Fish Feeding</b>	<b>Rearing Conditions</b>	<b>Marking</b>	<b>Meets Release Target</b>
<i>Nez Perce Tribal Hatchery (SOP Section 4.2)</i>					
Nez Perce Tribal Hatchery (Clw R.)	NC	NC	NC	NC	NC
N. Lapwai Valley (Clw R.)	NC	NC	NC	NC	NC
Luke’s Gulch (SF Clw R.)	NC	NC	NC	NC	NC
Cedar Flats (Selway R.)	NC	NC	NC	NC	NC
<i>Lyons Ferry Fish Hatchery (SOP Sections 4.3)</i>					
Big Canyon Creek Sub-Yearling (First Release) <sup>1</sup>	NC	NC	NC	NC	NC
Big Canyon Creek Sub-Yearling (Second Release) <sup>1</sup>					

<sup>1</sup> Two separate release goals at Big Canyon Creek (different release dates)

## 5. Lamprey

### 5.1. Releases in 2020 - Narrative

Migration Year 2019 adult counts collected from three Columbia River dams down by about 50% (1,166 in 2018 to 604 in 2019). Plan to PIT tag another 150 MY19 fish for release into Asotin, Lolo, and Potlatch to continue CRITFC paired-release study, and to PIT tag new summer (MY20) migrants (50%) that will be released directly into Mainstem Clearwater River without winter holding period.

- **Release Targets** - Release group numbers less this spring. Marking will be a group of winter-holdover (MY19) fish (150) and summer (MY20) direct release fish (~150).
- **Fish Health** - low summer mortality associated with dam passage and transport; no mortality from overwintering in tanks at NPTH
- **Transportation/Releases** - Typically wait for snow removal to gain access to some sites (SF Salmon, Secesh, Johnson Creek, Lolo Creek, Newsome Creek)

Release Location	Plan for 2020		Changes/Conditions that Occurred 2019-Early 2020		
	Release Target	Transport/Release	Fish Feeding	Fish Health	Marking
<i>Nez Perce Tribal Hatchery (SOP Section 5.1)</i>					
Lolo Creek	50 (Migration Year 2019)		N/A	25 morts all dams	all 50 PIT tagged
Orofino Creek	60 (Migration Year 2019)		N/A		
Newsome Creek	30 (Migration Year 2019)		N/A		
Red River	30 (Migration Year 2019)		N/A		
Big Canyon Creek	0		N/A		
SF Salmon River	60 (Migration Year 2019)		N/A		
Johnson Creek	60 (Migration Year 2019)		N/A		
Asotin Creek	50 (Migration Year 2019)		N/A		all 50 PIT tagged
Wallowa River	30 (Migration Year 2019)		N/A		
Minam River	30 (Migration Year 2019)		N/A		
Secesh River	60 (Migration Year 2019)		N/A		
Joseph Creek	60 (Migration Year 2019)		N/A		
Potlatch River	50 (Migration Year 2019)		N/A		all 50 PIT tagged
Mainstem Clearwater River	300? (Migration Year 2020)		N/A		50% of Direct Release 2020 MY (150 PIT?)
<b>TOTAL RELEASED</b>	<b>870</b>				

**5.2. Trap Operations for 2020**

**5.2.1. Trap Operations for 2020 - Narrative**

This year’s total CRITFC summer translocation trapping allocation per tribe for lamprey was not available in time for this AOP and may differ significantly from last year’s number due to the major decrease in migration run size in comparison to the previous year. The following projections are estimates based on the 2019 collections.

Trapping Location	Plan for 2020				
	Adult Fish Health	Trap Ops	Trapping target changes	Holding protocol changes	Disposition of adults
<i>Primary Trapping Facilities (SOP Sections 5.1)</i>					
Bonneville Dam		300			
John Day Dam		100			
The Dalles Dam		200			

# 6. Appendices

## 6.1. Clearwater Brood Calculators

### 6.1.1. FULL PRODUCTION Brood Calculator

PROGRAM INPUTS					HISTORICAL HATCHERY PERFORMANCE METRICS (5-YR AVG)								FORM CALCULATED VALUES										NOTE #
SPECIES	HATCHERY	PROGRAM	Life Stage	PREFERRED TRAPPING SITE	FORMAL RELEASE GOAL (F)	COMANAGER APPROVED CUSHION % (1)	% FEMALES IN BROODSTOCK (H)	% MORTALITY DURING HOLDING (I)	GREEN EGG FECUNDITY (J)	% REMAINING AFTER DISEASE CULLING (2)	% SURVIVAL GREEN TO EYED EGG (L)	% SURVIVAL EYED EGG TO RELEASE (M)	RELEASE GOAL WITH CUSHION (N)	EYED EGGS (O)	GREEN EGGS (P)	GREEN EGGS BEFORE DISEASE CULL (Q)	FEMALES SPAWNED (R)	MALES SPAWNED (S)	TOTAL ADULTS SPAWNED (T)	TRAPPED ADULTS NEEDED (U)	ADULTS TRAPPED TO MEET 1:1 RATIO (V)	SMOLTS PER TRAPPED ADULTS NEEDED (W)	
STLHD	DNFH	MS Clearwater at DNFH		DNFH	1,200,000	2%	50.0%	6.1%	6,882	88.0%	88.9%	85.7%	1,224,000	1,428,238	1,606,567	1,825,644	266	266	532	567	567	2,159	
		Red House Hole - SF Clw		SFClw Angler	400,000	2%	50.0%	6.1%	6,882	88.0%	88.9%	85.7%	408,000	476,079	535,522	608,548	89	89	178	190	190	2,147	
		Clear Creek		DNFH	300,000	2%	50.0%	6.1%	6,882	88.0%	88.9%	85.7%	306,000	357,060	401,642	456,411	67	67	134	143	143	2,140	
		Lolo Creek		DNFH	200,000	5%	50.0%	6.1%	6,882	88.0%	88.9%	85.7%	210,000	245,041	275,636	313,223	46	46	92	98	98	2,143	
	MVH	Salmon River		DNFH	93,000	5%	50.0%	3.5%	6,681	100.0%	84.0%	85.0%	97,650	114,882	136,765	136,765	21	21	42	44	44	2,219	
CFH	Clearwater		SFClw	843,000	3%	50.0%	3.5%	6,900	100.0%	80.0%	80.0%	868,290	1,085,363	1,356,703	1,356,703	197	197	394	409	409	2,123		
SP/SU CHIN	DNFH	NF Clearwater (DNFH)		DNFH	1,650,000	1%	50.0%	8.0%	3,924	90.4%	94.8%	89.7%	1,666,667	1,858,045	1,959,963	2,168,101	553	553	1,106	1,203	1,203	1,385 (3)	
		Selway River-Upper	Parr	DNFH	300,000	1%	50.0%	8.0%	3,924	90.4%	94.8%	89.7%	303,030	337,826	356,357	394,200	101	101	202	220	220	1,377	
		Trans. to NPTH-NPTH		DNFH	200,000	2%	50.0%	8.0%	3,924	90.4%	94.8%	89.7%	204,082	227,516	239,996	265,482	68	68	136	148	148	1,379	
		Trans. to NPTH-Lolo Creek		DNFH	180,000	2%	50.0%	8.0%	3,924	90.4%	94.8%	89.7%	183,673	204,764	215,996	238,934	61	61	122	133	133	1,381 (4)	
	KNFH	Kooskia NFH		KNFH	650,000	10%	50.0%	12.1%	3,661	88.2%	93.1%	88.6%	722,222	815,149	875,563	993,040	272	272	544	619	619	1,167	
	CFH	Red River		SFClw	1,280,000	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	1,280,000	1,333,333	1,418,440	1,558,725	405	405	810	853	853	1,501	
		Selway River-Lower		DNFH	400,000	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	400,000	416,667	443,262	487,102	127	127	254	268	268	1,493	
		Clear Creek		KNFH/DNFH	720,000	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	720,000	750,000	797,872	876,783	228	228	456	480	480	1,500	
		NF Clearwater-CFH (Baffle)		DNFH	389,000	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	389,000	405,208	431,073	473,706	124	124	248	262	262	1,485 (5)	
		NF Clearwater-CFH (Regular)		DNFH	320,000	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	320,000	333,333	354,610	389,681	102	102	204	215	215	1,488 (6)	
NPTH	Powell Pond (SUM)		Pow/SFSR	640,000	0%	50.0%	5.0%	3,900	93.0%	88.0%	96.0%	640,000	666,667	757,576	814,598	209	209	418	440	440	1,455 (7)		
	Lolo Cr (Clw)	Pre-Smolt	NPTH	150,000	1%	50.0%	5.0%	3,983	90.0%	85.0%	91.0%	151,515	166,500	195,883	217,647	55	55	110	116	116	1,306		
	Newsome Cr (SF Clw)	Pre-Smolt	NPTH	75,000	1%	50.0%	5.0%	3,983	90.0%	85.0%	91.0%	75,758	83,250	97,941	108,824	28	28	56	59	59	1,284		
	Meadow Cr (Selway)	Parr	NPTH	400,000	1%	50.0%	5.0%	3,983	90.0%	85.0%	91.0%	404,040	444,000	522,353	580,393	146	146	292	308	308	1,312		
FACH	NPTH	Snake River		LGD/NPTH	1,400,000	1%	50.0%	16.0%	3,985	94.0%	89.0%	96.0%	1,414,000	1,472,917	1,654,963	1,760,598	442	442	884	1,053	1,053	1,343	
COHO	DNFH	Clearwater			500,000	10%	51.0%	16.0%	2,505	94.3%	88.1%	83.6%	550,000	658,210	747,371	792,546	317	305	622	740	771	743	
	ECFH	Clearwater			550,000	10%	51.0%	16.0%	2,505	94.3%	88.1%	83.6%	605,000	724,031	822,108	871,801	349	335	684	815	848	742	

(1) In the 2013 AOP process, the co-managers approved a 10% cushion to meet release targets

(2) Culling of eggs for BKD, IHN, etc.

(3) Includes the New Production started in BY2015. Added production by increasing densities to 65k in all B-Bank rcways.

(4) New production started in BY2015, Lolo release group.

(5) NEW PRODUCTION in 2015. First timing rearing smolt in the adult holding ponds

(6) NEW PRODUCTION in 2015. Increasing rearing densities across raceways and spreading the new smolts across release groups

(7) Powell is not a US v OR program; however we will target 640,000 summer Chinook smolts even if the spring Chinook production target is set at the base US v OR level.

CELL FORMULAS	F*(1+G)	N/(M)	O/(L)	P/(K)	ROUNDUP (Q/1,0)	R/(H)-R	R+S	ROUNDUP (T/(1-1),0)	ROUNDUP(R/(1-H)/(1-1),0)	N/U
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### 6.1.2. US v OR Brood Calculator

PROGRAM INPUTS							HISTORICAL HATCHERY PERFORMANCE METRICS (5-YR AVG)						FORM CALCULATED VALUES											
SPECIES	HATCHERY	PROGRAM	Life Stage	PREFERRED TRAPPING SITE	FORMAL RELEASE GOAL (F)	COMANAGER APPROVED CUSHION % (1) (G)	% FEMALES IN BROODSTOCK (H)	% MORTALITY DURING HOLDING (I)	GREEN EGG FECUNDITY (J)	% REMAINING AFTER DISEASE CULLING (2) (K)	% SURVIVAL GREEN TO EYED EGG (L)	% SURVIVAL EYED EGG TO RELEASE (M)	RELEASE GOAL WITH CUSHION (N)	EYED EGGS (O)	GREEN EGGS (P)	GREEN EGGS BEFORE DISEASE CULL (Q)	FEMALES SPAWNED (R)	MALES SPAWNED (S)	TOTAL ADULTS SPAWNED (T)	TRAPPED ADULTS NEEDED (U)	ADULTS TRAPPED TO MEET 1:1 RATIO (V)	SMOLTS PER TRAPPED ADULTS NEEDED (W)	NOTE #	
STLHD	DNFH	MS Clearwater at DNFH		DNFH	1,200,000	2%	67.0%	6.1%	6,882	88.0%	88.9%	85.7%	1,224,000	1,428,238	1,606,567	1,825,644	266	131	397	423	859	2,894		
		Red House Hole - SF Clw		SFClw Angler	400,000	2%	67.0%	6.1%	6,882	88.0%	88.9%	85.7%	408,000	476,079	535,522	608,548	89	44	133	142	288	2,873		
		Clear Creek		DNFH	300,000	2%	67.0%	6.1%	6,882	88.0%	88.9%	85.7%	306,000	357,060	401,642	456,411	67	33	100	107	217	2,860		
		Lolo Creek		DNFH	200,000	5%	67.0%	6.1%	6,882	88.0%	88.9%	85.7%	210,000	245,041	275,636	313,223	46	23	69	74	149	2,838		
	MVH	Salmon River		DNFH	93,000	5%	67.0%	3.5%	6,681	100.0%	84.0%	85.0%	97,650	114,882	136,765	136,765	21	10	31	33	66	2,959		
CFH	Clearwater		SFClw	843,000	3%	67.0%	3.5%	6,900	100.0%	80.0%	80.0%	868,290	1,085,363	1,356,703	1,356,703	197	97	294	305	619	2,847			
SP/SU CHIN	DNFH	NF Clearwater (DNFH)		DNFH	1,050,000	1%	50.0%	8.0%	3,924	90.4%	94.8%	89.7%	1,060,606	1,182,392	1,247,249	1,379,701	352	352	704	766	766	1,385	(3)	
		Selway River-Upper	Parr	DNFH	300,000	1%	50.0%	8.0%	3,924	90.4%	94.8%	89.7%	303,030	337,826	356,357	394,200	101	101	202	220	220	1,377		
		Trans. to NPTH-NPTH		DNFH	200,000	2%	50.0%	8.0%	3,924	90.4%	94.8%	89.7%	204,082	227,516	239,996	265,482	68	68	136	148	148	1,379		
		Trans. to NPTH-Lolo Creek		DNFH	0	2%	50.0%	8.0%	3,924	90.4%	94.8%	89.7%	0	0	0	0	0	0	0	0	0	#DIV/0!	(4)	
	KNFH	Kooskia NFH		KNFH	650,000	10%	50.0%	12.1%	3,661	88.2%	93.1%	88.6%	722,222	815,425	875,860	993,376	272	272	544	619	619	1,167		
	CFH	Red River		SFClw	1,100,000	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	1,100,000	1,145,833	1,218,972	1,339,529	348	348	696	733	733	1,501		
		Selway River-Lower		DNFH	400,000	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	400,000	416,667	443,262	487,102	127	127	254	268	268	1,493		
		Clear Creek		KNFH/DNFH	635,000	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	635,000	661,458	703,679	773,274	201	201	402	424	424	1,498		
		NF Clearwater-CFH (Baffle)		DNFH	0	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	0	0	0	0	0	0	0	0	0	#DIV/0!	(5)	
		NF Clearwater-CFH (Regular)		DNFH	0	0%	50.0%	5.0%	3,850	91.0%	94.0%	96.0%	0	0	0	0	0	0	0	0	0	#DIV/0!	(6)	
		Powell Pond (SUM)		Pow/SFSR	640,000	0%	50.0%	5.0%	3,900	93.0%	88.0%	96.0%	640,000	666,667	757,576	814,598	209	209	418	440	440	1,455	(7)	
NPTHC	Lolo Cr (Clw)	Pre-Smolt	NPTHC	150,000	1%	50.0%	5.0%	3,983	90.0%	85.0%	91.0%	151,515	166,500	195,883	217,647	55	55	110	116	116	1,306			
	Newsome Cr (SF Clw)	Pre-Smolt	NPTHC	75,000	1%	50.0%	5.0%	3,983	90.0%	85.0%	91.0%	75,758	83,250	97,941	108,824	28	28	56	59	59	1,284			
	Meadow Cr (Selway)	Parr	NPTHC	400,000	1%	50.0%	5.0%	3,983	90.0%	85.0%	91.0%	404,040	444,000	522,353	580,393	146	146	292	308	308	1,312			
FACH	NPTHC	Snake River		LGD/NPTH	1,400,000	1%	50.0%	16.0%	3,985	94.0%	89.0%	96.0%	1,414,000	1,472,917	1,654,963	1,760,598	442	442	884	1,053	1,053	1,343		
COHO	DNFH	Clearwater			500,000	10%	49.7%	16.0%	2,505	94.3%	82.3%	90.0%	550,000	611,111	742,541	787,424	315	319	634	756	745	728		
	ECFH	Clearwater			550,000	10%	49.7%	16.0%	2,505	94.3%	82.3%	83.1%	605,000	727,951	884,509	937,973	375	380	755	899	887	673		
													CELL FORMULAS	F*(1+G)	N/(M)	O/(L)	P/(K)	ROUNDUP (Q/1,0)	R/(H)+R	R+S	ROUNDUP (T/(1-1),0)	ROUNDUP(R/(1-H)/(1-1),0)	N/U	

(1) In the 2013 AOP process, the co-managers approved a 10% cushion to meet release targets

(2) Culling of eggs for BKD, IHN, etc.

(3) Includes the New Production started in BY2015. Added production by increasing densities to 65k in all B-Bank rcways.

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(7) Powell is not a US v OR program; however we will target 640,000 summer Chinook smolts even if the spring Chinook production target is set at the base US v OR level.

**6.2. Sites, release numbers for adult Spring Chinook Salmon, when all Clearwater Basin Production Programs are above broodstock, harvest and C&S needs.\***

Release Location	Hatchery Source	Guideline Range	Proposed Max
<i>Selway Basin</i>			
McGruder	RR, NPTH, Clear, DNFH, KNFH	800 - 1,000	6,000
O'Hara Creek	RR, NPTH, Clear, DNFH	200	
Lower Selway	RR, NPTH, Clear, DNFH, KNFH	0 - 2,000	3,400
<i>SF Clearwater R.</i>			
Mill Creek	RR, NPTH, Clear, DNFH	150	
Meadow Creek	RR, NPTH, Clear, DNFH	150 - 300	
SF Clearwater R.	RR, NPTH, Clear, DNFH	0 - 500	
<i>Lochsa River</i>			
Main Lochsa, Badger Cr., Boulder Cr.	RR, NPTH, Clear, DNFH	500	
<b>TOTAL</b>		<b>1,800 - 4,650</b>	<b>10,000</b>

\*Release Locations are not prioritized. If guideline range is likely to be exceeded, co-managers will discuss disposition of excess fish.

\*There are weekly conference calls scheduled for Tuesdays, to keep all parties updated, informed, and coordinated on in-season run development, harvest estimates, broodstock collection, outplanting plans, etc.

**6.3. Proposed hatchery identifying marks for adult spring Chinook salmon outplanting in the Clearwater River.**

Hatchery / Location	Mark	Purpose
Dworshak	left opercle v-notch	outplant
Kooskia	1) 1 right opercle v-notches	outplant / fishery recycle
	2) if recycle returnees - additional opercle v-notch	outplant / fishery recycle
Clear Creek above weir	right opercle v-notch	natural spawners
Lochsa (Powell satellite)	left opercle punch	fishery recycle / outplant
Red River/Crooked River	1) right opercle punch	fishery recycle
	2) 2 right opercle punches	outplant (early)
Rapid River	dorsal punch	Clearwater (Selway) outplants
Lolo Cr. weir	right opercle punch	Broodstock collection for NPTH
NPTH	left opercle punch	outplant / fishery recycled to Lenore Boat Launch